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by

Malcolm Ross

Jeff Siegel

Robert Blust

Michael A. Colburn

W. Seiler

Department of Linguistics

Research School of Pacific Studies

THE AUSTRALIAN NATIONAL UNIVERSITY

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The Secretary
PACIFIC LINGUISTICS
Department of Linguistics
Research School of Pacific Studies
The Australian National University
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THE CONTRIBUTORS

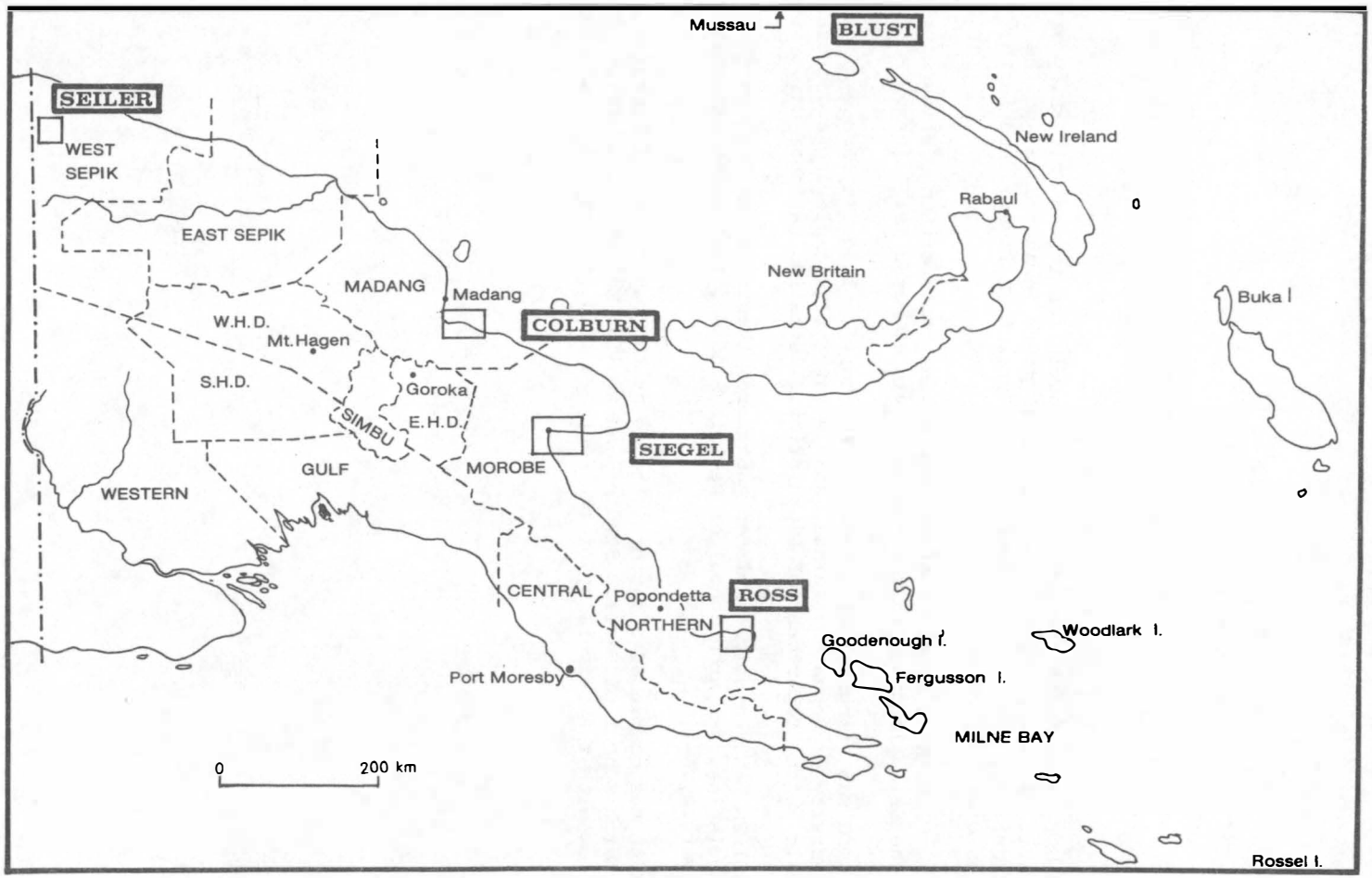
ROBERT BLUST is an Associate Professor of Linguistics at the University of Hawaii. He has previously held academic posts in Australia and the Netherlands, and has done fieldwork in Sarawak, Malaysia, and in the Manus District, Papua New Guinea.

MICHAEL A. COLBURN is a member of the Summer Institute of Linguistics working in the Erima language in the Madang Province, Papua New Guinea.

MALCOLM ROSS was Principal of the Goroka Teachers' College, a campus of the University of Papua New Guinea, and is currently completing a doctoral thesis in the Department of Linguistics, Australian National University.

WALTER SEILER has recently completed a doctoral thesis at the Department of Linguistics, Research School of Pacific Studies, Australian National University.

JEFF SIEGEL has completed a doctoral thesis at the Department of Linguistics Research School of Pacific Studies, Australian National University, and is now with the University of the South Pacific in Port Vila, Vanuatu.



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MAISIN: A PRELIMINARY SKETCH

Malcolm Ross

0. INTRODUCTION

The Maisin language, spoken in two areas of the Oro (Northern) Province of Papua New Guinea[1], has been a subject of discussion since 1911, when two papers, one by Strong and the other by Ray, were published together in the Journal of the Royal Anthropological Institute, London. Both writers agreed that Maisin contained both Austronesian and non-Austronesian (Papuan) elements. However, although the two men used the same set of data, Strong believed that the language was basically Austronesian, Ray that it was non-Austronesian. Thus began a debate which has continued without resolution ever since (it is summarised by Lynch 1977), and has placed Maisin in that category of 'mixed' languages (Capell 1976) with Ma'a (Mbugu) of Tanzania (Goodman 1971, Tucker and Bryan 1974) which are of special interest because of the light that they may shed on language change in contact situations (Bynon 1977:253-256; Comrie 1981:197-203).

It is because of this interest that this tentative sketch of Maisin is offered here. It is based on a smaller corpus of data than most linguists would accept for a descriptive study, and further research might well lead to considerable refinement of the description. However, although this paper makes no direct contribution to the discussion of the history of Maisin, it is offered in this tentative state for the value which its contents, one hopes, have for comparative and historical linguistics.

Maisin has two dialects, the swampland dialect of Kosirava, and the coastal dialect which Capell (1976) named Uyaku. The communalect from which the data for this paper were drawn is that of Marua village[2], some ten kilometres south-eastward along the coast from Uyaku village. The communalects of these two villages appear to be very similar.

Maisin is interesting not only because it has a mysterious history but also for a number of structural features. It is morphophonemically quite complex, and has an unusual syllable-structure. An important feature of Maisin morphology is its use of enclitics, which are attached to the whole phrase, although morphophonemically they form a word with the phrase-final item. Syntactically, Maisin is interesting for its apparent ergative tendency and for its marking of topic and focus.

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0.1 Abbreviations

For the sake of readability, English glosses are used instead of linguistic terms wherever a sensible gloss can be found. Thus 'as' is used for the medial durative enclitic to the predicate phrase, rather than DUR or some such abbreviation.

Abbreviations which are used are as follows:

ABL	ablative enclitic
ACC	accompaniment enclitic
ADJ	adjective
C	consonant
CFAC	counterfactual enclitic
C_o	consonant or zero
DEM	demonstrative
e	exclusive
ETP	emphatic topic marker enclitic
F	'medial' future enclitic
FC	focus marker enclitic
FUT	'final' future enclitic
i	inclusive
INS	instrument enclitic
LOC	locative enclitic
N	nasal consonant
N	noun
NADJ	noun used adjectivally
NEG	negative enclitic
NP	noun phrase
OS	object pronoun suffix
PAST	past enclitic
PG	progressive aspect
PL	plural enclitic
POSS	possessor enclitic
POT	potentiality enclitic
PRED	predicate marker enclitic
PREF	prefix to verb stem
PRON	pronoun
PSR	possessor suffix
Q	interrogative enclitic
QNT	quantifier or numeral
REF	referential enclitic
SP	subject pronoun prefix
STEM	verb stem
TEMP	temporal noun
TP	topic marker enclitic
TQ	interrogative topic marker enclitic
V	vowel
.	syllable boundary in transcriptions
$	syllable boundary in rules
//	pause
#	word boundary
+	clitic boundary
-	morpheme boundary (in section 1, affix boundary)

1. PHONOLOGY

Because enclitics are attached to the whole phrase, the typical building block of the Maisin clause is a constituent with the structure:

(1) $\left\{\begin{matrix}\text{NP}\\\text{NP}\end{matrix}\right\}$ (enclitic (enclitic (enclitic (...))))

following:

(2)	[va:]	*house*	[vare]	*in the house*
	[waᵘŋ]	*new*	[va: waᵘne]	*in the house*
	[foⁱŋ]	*night*	[foⁱme]	*in the night*
	[tu:fi]	*Tufi*	[tu:fiʸe]	*in Tufi*
	[bega:ti]	*garden*	[begate]	*in the garden*

In a case like this, there are two descriptive options. The first is to segment the combinations on the right either before the final -Ce or the final -e, and to list the 'irregular' forms assumed by one or the other morpheme. The second is to posit underlying representations of morphemes from which surface structures are derived by morphophonemic rules. The first option is rather cumbersome: it leaves us with an enclitic morpheme meaning *in* which has allomorphs [-re], [-ne], [-me], [-ye], and [-e], as well as with noun/adjective stem irregularities or with noun/adjective allomorphs [va:] and [var-], [vaᵘŋ] and [waᵘn-], [foⁱŋ] and [foⁱm-], [bega:ti] and [begat-], entailing unpredictable modifications to the independent stem. The second option, based on generative phonological theory, according to which the underlying noun/adjective representations /var/, /waun/, /foim/, /tuufi/ and /bagati/ and the enclitic representation /-e/ are posited, and morphophonemic rules are provided to derive surface forms from them, is considerably more economic for Maisin, and is used in this paper, although it does occasionally entail positing underlying representations which never occur as surface forms and whose psychological reality remains quite unproven.

1.1 Phonemes

Our starting point is the set of systematic phonemes shown below with the distinctive features used in the statement of phonological rules. Since the features proposed by Chomsky and Halle (1968) do not easily capture an important phonological process in Maisin, fricative stopping (rule D below), the features proposed by Ladefoged (1971) are used here.

All five vowels and all non-nasal stops and voiceless fricatives occur in both 'short' and 'long' forms, but these are derivable from the phoneme set below.

There are five vowel phonemes and two approximants, all with the phonetic values suggested by their symbols. The mid and high vowels tend to be tense when 'long' or in a cluster and lax otherwise; vowels may be nasalised before a nasal consonant; and word-final vowels are sometimes voiceless after a voiceless consonant. Their distinctive features are as follows:

(3)

	i	e	a	o	u	y	w
rate	-	-	-	-	-	+	+
height	+1	0	-1	0	+1	+1	+1
frontness	+1	+1	0	-1	-1	+1	-1
round	-	-	-	+	+	-	+

Ladefoged's feature [+/-rate] captures distinctions based on rapidity of articulation, i.e. the approximants /y w/ are distinguished from the vowels /i u/ by rapidity of articulation (a flap is similarly distinguished from a stop).

The one distributional peculiarity of the vowels is that only [i e a] occur word initially, not [o u]. The most natural phonological explanation of this is that in underlying forms all five vowels occur word initially, but that /o u/ become surface [wo wu][3]. However, there is no morphophonemic evidence to show whether the underlying forms are /o u/ or /wo wu/, and /w/ is certainly an independent phoneme in Maisin, occurring, for example, initially before /a/ (e.g. [wa^{u}ŋ] /waun/ *new*), where it contrasts with both /v/ (e.g. [va:] /vaa/ *house*) and with /Ø/ (e.g. [a^{u}] /au/ *I*).

(4)

						place of articulation:			
nasal	stop	fric	rate	voice	round	bilab	alv	pal	vel
+	+	–	–	+	–	m	n		
–	+	–	–	–	–		t		k
–	+	–	–	+	–	b	d	j	g
–	–	+	–	–	–	f	s		
–	–	+	–	–	+	fw			
–	–	+	–	+	–	v			
–	–	–	+	+	–		r		
–	–	–	+	+	–			y	
–	–	–	+	+	–				w

The segments [ŋ], [ñ] and [k^{w}] frequently occur in surface forms, but it will be shown that the two nasals derive from /n/ and /m/ and the rounded velar stop from a sequence of /k/ + rounded vowel.

A distributional oddity is that [v] never occurs before [o] or [u], and its surface form in this environment is apparently [w]. Because /w/ is also a phoneme, however, we cannot be sure whether /vo/ and /vu/ actually occur.

1.2 Phonotactics

The most interesting characteristic of Maisin surface structure is its syllabification and timing.

Almost all Maisin syllables conform to the formula:

(5) $C_oV \left\{ \begin{matrix} V_o \\ C_o \end{matrix} \right\}$

where V is a vowel, C is a consonant, and subscript 'o' indicates that the preceding segment may be either present or absent.

The final non-nasal C of a C_oVC syllable is always identical with the initial C of the following syllable word medially; a word-final syllable never ends in a non-nasal C. The syllable-final nasal C of a C_oVC syllable is, with one exception noted in rules E and F below, homorganic with the initial C of the following syllable or, word finally, neutralised to [ŋ].

Closely associated with the syllable is the *mora*.[4] Maisin timing can be analysed quite strictly in terms of morae, time-units of approximately equal

length in citation forms. A 'short' syllable, i.e. one of the structure C_oV, has a length of one mora; for systematic purposes this is notated by attributing the feature [+ mora] to all the vowels above. A 'long' syllable, i.e., one with a third element, V or C, lasts two morae. For example (figures above a transcription count morae, starting from 1 for each syllable; a stop ('.') indicates a syllable boundary):

(6)	1 $C_oV.$	1 1 1 [da.ma.na]	*star*
(7)	12 $C_oVV.$	12 [i.vei.ve]	*he held*
		12 [roi.se]	*sisters*
		12 [ai.re]	*it's him*
(8)	12 $C_oVC.$	12 12 [tam.buŋ]	*moon*
		12 [ai.roŋ]	*old*
		12 12 [nen.naŋ]	*that one*

The pattern represented by these examples enables us to disambiguate 'long' vowels and 'long' consonants.

Since a VV sequence of unlike vowels, as illustrated above, is two morae in duration, but is the nucleus of a single syllable (the sequences [ei], [oi], and [ai] are phonetically glides), it is consistent to interpret a 'long' vowel — which also lasts two morae — in the same way: as a VV sequence of like vowels which also constitutes a syllable nucleus. The pair below illustrates this:

(9)	1 2 $C_oV_iV_j$	12 [ma.tau]	*my eye*
(10)	1 2 $C_oV_iV_i$	12 [ma.taa]	*his eye* ([ma.ta:])[5]

(subscripts $_i$ and $_j$ mark identity and difference)

This interpretation is supported by the morphophonemic generation of a 'long' vowel from two short ones, as in:

(11)	/i-rua + ana/	*he-hear* + FUT
	[i.ru.aa.na]	*he will hear*

'Long' consonants occur only word medially, which suggests that they should be treated as a sequence of two like consonants across a syllable-boundary. This is illustrated below:

(12)	12 $C_oVC_i.C_j$	12 [mun.ju]	*egg*
(13)	12 $C_oVC_i.C_i$	12 [bej.ji]	*big*

(14) 12 12
$C_oVC_i.C_j$ [i.kaŋ.kaŋ] *he is eating*

(15) 12 12
$C_oVC_i.C_j$ [i.kak.ka.ri] *he is scratching*

The mora-patterning of the two types of syllable sequence (nasal + non-nasal consonant, consonant + like consonant: other types do not occur) is the same.

This interpretation is supported by the fact that many C.C sequences are derived morphophonemically from a sequence of two (unlike) consonants. Thus the progressive aspect of the Maisin verb is formed by (usually partial) reduplication of the simple form:

(16) /i-kan/ *he ate*
[i.kaŋ]

/i-kan-kan/ *he is eating*
[i.kaŋ.kaŋ]

If the consonant which ends the reduplicated CVC sequence is non-nasal, it is assimilated to the following consonant, giving a C.C sequence of like non-nasal consonants:

(17) /i-tar-ii/ *he chopped them*
[i.ta.rii]

/i-tar-tar-ii/ *he is chopping them*
[i.tat.ta.rii]

(18) /i-kari/ *he scratched*
[i.ka.ri]

/i-kar-kari/ *he is scratching*
[i.kak.ka.ri]

(19) /i-kite-Ø/ *he saw them*
[i.ki.te]

/i-kit-kite-Ø/ *he is seeing them*
[i.kik.ki.te]

Similarly, the third person singular object pronoun suffix /-si/ is added to the verb stem —

(20) /e-kko-Ø/ *he shot them*
[ek.ko]

/e-kko-si/ *he shot it*
[ek.ko.si]

(21) /i-fune-Ø/ *he cut them*
[i.fu.ne]

/i-fune-si/ *he cut it*
[i.fu.ne.si]

— but where there is a stem-final non-nasal consonant, assimilation again takes place:

(22) /i-tar-ii/ *he chopped them*
[i.ta.rii]

/i-tar-si/ *he chopped it*
[i.tas.si]

(23) /e-kesev-ii/ *he split them*
[e.ke.se.vii]

/e-kesev-si/ *he chopped it*
[e.ke.ses.si]

Thus evidence that a surface 'long' consonant sometimes represents an underlying two-consonant sequence supports the distributional (syllabic) evidence to suggest that a 'long' consonant should be regularly interpreted as a two-consonant sequence.

There are a few items which contain syllables of the form CVVC. These are divisible into two groups according to whether their vowels are like or unlike:

(24) 1 2 12
$CV_iV_jC.$ [i.kii.kias.si] *he is digging it*
1 2
[wauŋ] *new*

(25) 1 2 12
$CV_iV_iC.$ [ga.raan.di] *pandanus*
12
[gu.muuŋ.gi] *Tahitian chestnut*

Where the vowels are unlike, and form a glide, the first mora falls on the syllabic segment of the glide, the second on the syllable-final consonant. Where the vowels are like, the two morae fall on the vowels (otherwise they would coalesce into one short vowel), and the syllable-final consonant, nasal in all known cases, has no mora.

1.3 Phonological rules

1.3.1 Preliminaries

This section presents as a partially ordered set the major rules which change underlying structures into surface forms[6]. These rules are 'major' in the sense that they apply in all instances of their specified contexts; there are also minor rules which are dealt with as elements of morphology in section 2.

As we saw in section 1.2, Maisin has quite a tightly constrained set of phonological syntagms both within syllables and across syllable boundaries. These syntagms are primes of the phonological system in the sense that, given a string of segments, the positions of syllable boundaries are predictable from that string, and yet at the same time, there is a finite set of strings which can occur between boundaries (Hooper 1978:192-193). Neither is logically prior to the other. The set of Maisin syllable structures, with morae assigned, is:

(26)
1
a. $C_oV.$

12
b. $C_oVV.$

12 12
c. $C_oVC.$, including $C_oVN.$

1 2 1 2
d. $CV_iV_jC.$, including $C_oV_iV_jN.$

1 2
e. $CV_iV_iN.$

The versions of (26c) and (26d) which have non-nasal final consonants are always followed by a like consonant initiating the following syllable — they do not occur word finally. Syllable final nasal consonants may be neutralised to [ŋ] word finally, and are assimilated to the place of articulation of a following consonant word medially and some times word finally.

This account applies both to (unanalysable) morphemes and to larger units of structure — words and phrases. Hence it appears that the syllable structure of Maisin morphemes is the result of the operation in the past of a set of context-sensitive phonological rules which are still productive in units at ranks above that of the morpheme, some applying only optionally (in rapid speech) at their highest rank of application. Thus the assimilation of a nasal to a consonant across a word/enclitic boundary is obligatory: the final /n/ of /jamen/ *sons* remains unaltered before a vowel-initial enclitic, is assimilated obligatorily before a consonant-initial enclitic —

(27) a. [arijamena viisi]
/ari + jamen + a # viisi/
his + *sons* + TQ # *how.many*
how many sons has he?

b. [arijameŋka ikite]
/ari + jamen + ka # i-kite/
his + *sons* + TP # *he-see*
he saw his sons

where '-' is a stem/affix boundary;
'+' is a word/clitic boundary;
'#' is a word/word boundary.

— but across a word boundary may be assimilated to the following consonant or neutralised to [ŋ], as in the phrase meaning 'younger generation':

(28) a. [jamemmomorobi] OR [jameŋ momorobi]
/jamen + momorobi/
sons + *daughters*

Just as rules operating across syllable boundaries apply within morphemes and again at higher ranks, so syllabification itself is not just a property of underlying forms, but is a process which may be reapplied to strings after rules have applied (Hooper 1976:181-2; Donegan and Stampe 1978). Thus in the following —

(29) a. 1 12
[i.rua]
/i-rua/
he-hear
he heard

b. 1 1 12 1
[i.ru.aa.na]
/i-rua + anan/
he hear + FUT
he will hear

— resyllabification occurs in (29b) where the addition of the future enclitic /-anan/ causes a redistribution of syllable boundaries in /rua/ *hear*, in accordance with rules given below.

The syllable structures listed in (26) above were given with their morae assigned. The assignment of syllabicity and morae to vowels is also a prime of the system, in that the mora is a unit of syllable-timing, and every Maisin syllable has at least one mora-carrying vowel as its syllabic nucleus. A second vowel within a syllable also carries a mora except in the CV_iV_jC structure examplified by [wauŋ] *new*, and it accords with the relative infrequency of this syllable structure, and with the fact that whenever possible a morpheme with this structure is resyllabified with a second mora assigned, as in (30b), if we take it that the presence of only one mora on the vowels of a CV_iV_jC syllable is the result of reassignment, and is not a prime:

(30) a.
1 2
[wauŋ.]
/waun/
new

b.
12 12
[wau.naa]
/waun + aa/
new + PL

Consonants are intrinsically neutral with regard to mora-assignment. A syllable-initial consonant has no mora, whilst a syllable-final consonant does have one, except in the case of CV_iV_iN syllables. Thus the assignment of morae to consonants is not a prime.

There is an inverse relationship between the prosodic feature [+/- mora] and the phonemic feature [+/- rate]. Any segment which is [+ mora] cannot be [+ rate], i.e. cannot have distinctively brief articulation. This is a relationship which has a consequence in rule D below. Conversely, any segment which is [+ rate] cannot be [+ mora], i.e. cannot carry timing. However, a syllable-initial, and therefore [- mora], consonant may be either a [+ rate] or a [- rate] phoneme, and a [- rate] phoneme, i.e., a nasal or a stop, may occur in either a syllable-initial (i.e., [- mora]) or syllable-final (i.e., [+ mora]) environment.

1.3.2 Syllable structure conditions

The phonological primes may be stated as:

A. Syllable-structure condition

$\$ C_oVV_oC_o \$$

A1. Inter-syllabic condition 1

$$\begin{bmatrix} C \\ -\text{ nasal} \end{bmatrix}_i \$ C_i$$

A2. Inter-syllabic condition 2

$$\begin{bmatrix} C \\ A\ \text{place} \\ +\text{ nasal} \end{bmatrix} \$ \begin{bmatrix} C \\ A\ \text{place} \end{bmatrix}$$

A3. Vowel mora condition

$$V \longrightarrow \begin{bmatrix} +\text{ syllabic} \\ +\text{ mora} \end{bmatrix}$$

These conditions may be used to generate rules, e.g. a morpheme-initial syllabification rule XCV → X $ CV. But such a rule does not tell us anything, in that it simply restates a feature of A, and generates no new structures. However, there are rules (C and C2 below) corresponding to A1 and A2; these rules ensure that inter syllabic conditions are also maintained across certain morpheme boundaries.

Within Maisin morphemes, three kinds of two-vowel sequence occur (sequences of more than two vowels do not occur morpheme internally), and these may also be regarded as primes of the system:

A4. Vowel sequence condition

a. 'Long' vowels

V_iV_i

/ii ee aa oo uu/

e.g., /fii/ *bird*
/bureeji/ *eel*
/tamaati/ *man*
/forrogi/ *cloud*
/suusi/ *breast*

b. Falling (and upgliding) diphthongs

$$\begin{bmatrix} V \\ < +1 \text{ height} \end{bmatrix} \begin{bmatrix} V \\ +1 \text{ height} \end{bmatrix}$$

/ei ai oi eu au ou/

e.g., /sandei/ *two*
/yain/ *intestines*
/foim/ *night*
/neusa/ *squid*
/sauki/ *woman*
/tou/ *sugarcane*

c. Rising (and downgliding) diphthongs

$$\begin{bmatrix} V \\ +1 \text{ height} \end{bmatrix} \begin{bmatrix} V \\ -1 \text{ height} \end{bmatrix}$$

/ia ua/

e.g., /sia/ *string*
/rua/ *hear*

The first element of a 'long' vowel or an upgliding diphthong, and the second element of a downgliding diphthong, is the syllabic nucleus and the carrier of stress and intonation, whilst the other element loses syllabicity:

B. Syllabic nucleus assignment

a. $V_i \rightarrow [-\text{ syllabic}]/V_i$

b. $$\begin{bmatrix} V \\ +1 \text{ height} \end{bmatrix} \rightarrow [-\text{ syllabic}] \begin{bmatrix} V \\ < +1 \text{ height} \end{bmatrix} \$$$

(absence of specification of sequence on an environment /X indicates that the rule applies in both of the environments /_X and /X_.)

As we observed above, the assignment of a mora to a consonant is not a prime, in that syllable-initial consonants have no mora, whereas syllable-final consonants do carry a mora except in the case of a nasal in syllables with the structure CV_iV_iN. Since these syllables are rare, we may treat the missing mora as resulting from reassignment and take it as a rule of Maisin that all syllable-final consonants are [+ mora]:

B1. Consonant mora assignment

C → [+ mora]/_ $ C

1.3.3 Major phonological rules

It was observed above that there are context-sensitive rules which have worked their way diachronically from application at morpheme internal syllable boundaries up the hierarchy of syllable boundaries, so that they now apply, obligatorily or optionally, across syllable boundaries between larger units. Since only the results of their application are now visible morpheme internally (that is, we have no evidence of synchronic input to these rules morpheme internally), they are not regarded as synchronically productive within morphemes, and are instead expressed as the intersyllabic conditions in A1 and A2 above. However, these rules, stated as C and C2 below, and others, *are* productive at specified higher-rank boundaries which result from the concatenation of morphemes into strings.

Four ranks of syllable boundaries, forming a 'boundary hierarchy', are recognised for phonological purposes:

a) morpheme-internal boundaries, at which inter-syllabic conditions A1 and A2 operate;
b) word-internal boundaries, including the boundaries between
   i. reduplicated syllable and verb stem (cf.(16) to (19) above);
   ii. stem and suffix (cf.(20) to (23) above);
c) boundaries between word and enclitic, and, since word + enclitic sequences themselves behave as words, between enclitic and enclitic.
d) boundaries between words.

The major productive phonological rules form three sets, according to the syllable structures they apply to:

a) closed syllables with non-nasal final consonants (C_oVC);
b) closed syllables with nasal final consonants (C_oVN);
c) open syllables in /-i/ (Ci).

Open syllables in vowels other than /-i/ are not subject to phonological processes.

The C_oVC and C_oVN rule sets divide the boundary hierarchy into two parts. Each set has a context-sensitive rule applying to the lower part of the hierarchy and a context-free rule applying to the rest. The Ci set has only one, context-sensitive, rule.

The context-sensitive C_oVC rule ensures the application of the inter-syllabic condition A1 at word-internal boundaries by assimilating any syllable-final non-nasal consonant to the following consonant across a morpheme boundary within a word, as illustrated in (17) to (19) and (22-23). (22) is repeated here as (31):

(31) [i.tas.si]
/i-tar-si/
he-chop-it
he chopped it

This rule is formalised as:

C. Non-nasal assimilation

$$\begin{bmatrix} C \\ -\text{ nasal} \end{bmatrix} \rightarrow C_i / \_ - C_i$$

The complementary context-free C_oVC rule turns a C_oV_iC sequence into a $C_oV_iV_i$ sequence at a word/enclitic boundary where the enclitic begins with a consonant (but not where it begins with a vowel) and at any word boundary. For example:

(32) a. [vaa]
/var/
house (word boundary)

b. [vaaneŋ]
/var + nen/
house + that
that house (C-initial enclitic)

BUT:

c. [variŋ]
/var + in/
house this
this house (V-initial enclitic)

(33) a. [arisiravaa]
/air + sirava-r #/
his + side-his
his side (word boundary)

b. [arisiravaana]
/air + sirava-r + na/
his + side-his + FC
his side (C-initial enclitic)

BUT:

c. [arisiravare]
/air + sirava-r + e/
his + side-his + LOC
at his side (V-initial enclitic)

This rule is very simply formalised as:

C1. Non-nasal neutralisation

$$\begin{bmatrix} C \\ -\text{ nasal} \end{bmatrix} \rightarrow V_i / V_i \_\_ \begin{Bmatrix} \# \\ + C \end{Bmatrix}$$

The second set of major productive rules affects syllables ending in nasal consonants (C_oVN).

The context-sensitive C_OVN rule causes the inter-syllabic condition of nasal assimilation in A2 to apply across all boundaries of ranks up to and including word/enclitic boundaries, and optionally, i.e. in casual speech, across word-boundaries as well. This was illustrated by the various forms of /jamen/ *sons* in (27) and (28) above. It is also seen in:

(34) a. [ikaŋkaŋ]
/i-kan-kan/
he-eat-eat
he is eating

b. [ikaŋkamme]
/i-kan-kan + me/
he-eat-eat + PAST
he has just eaten

BUT:

c. [ikanana]
/i-kan + anan/
he-eat + FUT
he will eat

(35) a. [aŋka]
/am + ka/
we.e + TP
we

b. [ammataŋ]
/am + mata-m/
we.e + *eye-our.e*
our eyes

(36) a. [iñyovere]
/in + yove-r + e/
this + *side-his* + LOC
on this side of it

BUT:

b. [varina]
/var + in + a/
house + *this* + TQ
this house?

This rule may be formalised as:

C2. Nasal assimilation

$$\begin{bmatrix} C \\ +\text{ nasal} \end{bmatrix} \rightarrow [\text{ A place }] / \_ \left\{ \begin{matrix} \# \\ + \\ - \end{matrix} \right\} \begin{bmatrix} C \\ \text{A place} \\ +\text{ voice} \\ \text{AND/OR} \\ +\text{ stop} \end{bmatrix}$$

Rule C2, which assimilates a nasal consonant to the place of articulation of a following consonant unless the latter is a voiceless fricative, thus has a much wider application than the corresponding rule of non-nasal assimilation, C, which operates only at word-internal boundaries.

Conversely, the complementary context-free rule of nasal neutralisation, which turns a syllable-final consonant to [ŋ], applies only at word boundaries, and even then only at pauses or in more careful speech. This rule was illustrated in example (28) above, and is formalised as:

C3. Nasal neutralisation

$$\begin{bmatrix} C \\ +\ \text{nasal} \end{bmatrix} \rightarrow [\text{vel place}] / \_\ \#\ \left\{ \begin{matrix} // \\ ! \end{matrix} \right\} V$$

where '//' = pause
and '!' = careful speech

The output of rule C, non-nasal assimilation, is inevitably a C_iC_i sequence, and further changes occur as a consequence of this. For example:

(37) [iroddotii]
/i-rot-rot + ii/
he-tie-tie + them
he is tying them

cf. [irotii]
/i-rot + ii/
he-tie + them
he tied them

(38) [iyajjavii]
/i-yav-yav + ii/
he-count-count + them
he is counting them

cf. [iyavii]
/i-yav + ii/
he-count + them
he counted them

(39) [itaruwuggurii]
/i-taru-wur-wur + ii/
he-hit-hit + them
he is hitting them

cf. [itaruwurii]
/i-taru-wur + ii/
he-hit + them
he hit them

(40) [ivabbavii]
/i-vav-vav + ii/
he-boil-boil + them
he is boiling them

cf. [ivavii]
/i-vav + ii/
he-boil + them
he boiled them

In each of the changes illustrated here, a C_iC_i sequence of voiced non-nasal non-stops becomes a sequence of voiced stops at the same point of articulation. Since the output of C is a C_iC_i sequence where by rule B1 the first consonant is [+ mora], and since a [+ mora] consonant cannot be [+ rate], the [- mora]

consonants /r/, /y/ and /w/ predictably undergo a change in manner of articulation. The rapidity of articulation captured by Ladefoged's feature [+ rate] distinguishes the flap /r/ from the stop /d/, and the approximants /y/ and /w/ from the vowels /i/ and /u/. All three consonants lose their rapidity of articulation, so that 'long' /r/ is not */rr/, but /dd/, i.e. not [+ rate] but [- rate]. In addition, the two approximants, whose consonantal feature consists only in the feature [+ rate], make an articulatory closure to retain consonantality, so that [- stop] becomes [+ stop], in the process of which /w/ loses the secondary articulation denoted by [+ round]. Thus:

Non nasal stopping

$$\begin{bmatrix} C \\ A\ place \\ +\ rate \end{bmatrix}_i C_i \rightarrow \begin{bmatrix} C \\ A\ place \\ -\ rate \\ +\ stop \end{bmatrix}_j C_j$$

The change of */vv/ to /bb/ also has an articulatory explanation. The articulation of the voiced fricative requires both subglottal air pressure (for voicing) and oral air pressure (for frication), and the maintenance of both for a longer period than is required for a stop. When this period is increased as a consequence of rule C, */vv/ becomes a long stop, reducing the increased articulatory difficulty (labials also require greater oral pressure than lingually articulated consonants). It is noteworthy that the voiceless long fricatives /ff/ and /ss/ do not become stops, as they require no subglottal pressure and are therefore easier to maintain.

To incorporate the change of */vv/, the rule above must be expanded as follows:

D. Non-nasal stopping

$$\begin{bmatrix} C \\ A\ place \\ -\ nasal \\ +\ voice \end{bmatrix}_i C_i \rightarrow \begin{bmatrix} C \\ A\ place \\ -\ rate \\ +\ stop \end{bmatrix}_j C_j$$

Just as rule D applies to the output of the non-nasal assimilation rule C, so rule D1 below applies to the output of the nasal assimilation rule C2. However, the data indicate that post-nasal stopping applies only to /y/. Of the other eligible consonants, /r/ remains unchanged, i.e., the sequence [nr] is acceptable, as in:

(41) [kanruaŋ]
/kan-ruam/
eat-food
food

and the sequences /Nv/ and /Nw/ have not been found. Post-nasal stopping occurs in:

(42) [iyoñjomii]
/i-yom-yom + ii/
he-hide-hide + them
he is hiding them

cf. [iyomii]
/i-yom + ii/
he hide them
he hid them

The rule is:

D1. Post-nasal stopping

$$\begin{bmatrix} \text{C} \\ \text{pal place} \\ \text{- stop} \\ \text{+ rate} \end{bmatrix} \rightarrow \begin{bmatrix} \text{+ stop} \\ \text{- rate} \end{bmatrix} / \begin{bmatrix} \text{C} \\ \text{pal place} \\ \text{+ nasal} \end{bmatrix} \_$$

As noted above, rule C2 does not apply if the succeeding consonant is a voiceless fricative, that is, /f/ or /s/. Before both consonants, N varies, seemingly freely, between [n] and [ŋ]. For example:

(43) [ikanfe]
/i-kan + fe/
he-eat + F
he will eat and then ...

(44) [ikuŋfe]
/i-kum + fe/
he drink + F
he will drink and then ...

(45) [foinfe] OR [foiŋfe]
/foim + fe/
night + F
tonight

(46) [aŋseŋ]
/am + sem/
we.e + INS
by us

This partial neutralisation of the nasal consonants could be described in a number of ways, but probably the most natural (Ferguson 1977:274) is in terms of two rules, the first of which always changes [m] to [n], whilst the second optionally changes [n] to [ŋ]. In rapid speech we also find nasalisation of the preceding vowel and loss of the nasal consonant. Thus the very frequent sentence-introducer /nen-so/ (lit. *that*-REF) *(and) so* occurs as [nenso], as [neŋso], and as [nẽso]. This nasalisation also needs to be incorporated into our second rule. The rules are:

E. Bilabial nasal neutralisation

$$\begin{bmatrix} \text{C} \\ \text{+ nasal} \\ \text{bilab place} \end{bmatrix} \rightarrow \text{[alv place]} / \_ \begin{Bmatrix} \# \\ + \\ \$ \end{Bmatrix} \begin{bmatrix} \text{C} \\ \text{- voice} \\ \text{- stop} \end{bmatrix}$$

F. Alveolar nasal neutralisation

a) $$\text{V} \begin{bmatrix} \text{C} \\ \text{+ nasal} \\ \text{alv place} \end{bmatrix} \rightarrow \text{V} \begin{bmatrix} \text{C} \\ \text{+ nasal} \\ \text{vel place} \end{bmatrix} / \_ \begin{Bmatrix} \# \\ + \\ \$ \end{Bmatrix} \begin{bmatrix} \text{C} \\ \text{- voice} \\ \text{- stop} \end{bmatrix}$$

b) $$\text{V} \begin{bmatrix} \text{C} \\ \text{+ nasal} \\ \text{vel place} \end{bmatrix} \rightarrow \begin{bmatrix} \text{V} \\ \text{+ nasal} \end{bmatrix} / \_ \begin{Bmatrix} \# \\ + \\ \$ \end{Bmatrix} \begin{bmatrix} \text{C} \\ \text{- voice} \\ \text{- stop} \end{bmatrix}$$

Thus [neŋso] results from the application of F(a), [nẽso] from the application of both F(a) and F(b). One of the results of applying both E and F is that a nasal consonant becomes [ŋ]; this is also the result of rule C1, nasal neutralisation of word-final nasals, and it seems likely that C1 also arose diachronically through a similar sequence of processes.

The third set of rules is a single-rule set affecting syllables of the form /Ci/. There is no rule affecting the upper part of the hierarchy: word-final /-Ci/ is unaffected in careful speech, before a pause, and in general before a following consonant. The rule affecting the lower part of the hierarchy entails loss of /-i/ before a vowel across a word boundary in normal speech, across a word/enclitic boundary, and across a stem/suffix boundary, i.e. across the same range of the boundary hierarchy as rule C2. For example:

(47) [kinditeeka]
/kindi # itee + ka/
day # *other* + TP
one day ... (word boundary)

(48) [kumatana]
/ku-mat- + anan/
you.sg-*die* + FUT
you will die (word/enclitic boundary)

(49) [raate]
/raati-e/
small-PL
small (ones) (stem/suffix boundary)

This rule is:

G. /i/-deletion

$$\begin{bmatrix} V \\ +1 \text{ height} \\ +1 \text{ frontness} \end{bmatrix} \rightarrow \emptyset \; / \; C\_ \begin{Bmatrix} \# \\ + \\ - \end{Bmatrix}$$

To summarise, Maisin has three sets of major phonological rules:

C_oVC rules:

C Non-nasal assimilation
C1 Non-nasal neutralisation
D Non-nasal stopping

C_oVN rules:

C2 Nasal assimilation
C3 Nasal neutralisation
D1 Post-nasal stopping
E Bilabial nasal neutralisation
F Alveolar nasal neutralisation

Ci rule:

G /i/-deletion

Rules C1 and C3 are context-free processes, in the sense that they apply before both consonants and vowels. Rules C, C2 and G are context-sensitive, such that consonants undergo change before consonants and vowels before vowels, minimising articulatory difficulty. It is characteristic of context-sensitive processes

that they operate most powerfully within words, then across boundaries between less bound items (in Maisin, enclitics), then across word boundaries in casual or rapid speech, and finally across word boundaries in careful speech (Stampe 1979:22-25). Whereas the domain of C2 and G is almost the whole boundary hierarchy, and excludes only word boundaries in careful speech, that of C is only within words, leaving C1 to operate at boundaries between less bound items.

We have so far not considered phonological changes at prefix/stem and proclitic/word boundaries. The reason for this is that prefixes and proclitics form much smaller sets than suffixes and enclitics, and permit little generalisation. The only prefixes are the subject-markers of the verb phrase; these have their own phonological rules which are treated as an aspect of verb morphology (section 2.3.2). Proclitics form two sets. The first consists of the demonstrative /in/ *this* in the phrase /in + yove-r + e/ *on this side* (cf.(36a)), to which rule C2 applies, but not D1 as would be predicted at a clitic boundary. The second set consists of proclitic personal pronoun forms (see section 2.1.7) which precede the noun in possessive noun phrases, e.g. /au/ in /au + mata-u/ (lit. *I + eye-my*) *my eyes*. Of these, two, /am/ *we*(exc) and /em/ *you*(pl), end in a nasal consonant. In careful speech /am/ and /em/ undergo, not rule C2 as predicted for a clitic, but rule C3:

(50) [aŋ mataŋ]
/am + mata-m/
we.e + eye-our.e
our eyes

(51) [eŋ mataŋ]
/em + mata-m/
you.pl + *eye-your*.pl
your eyes

Thus proclitic-final consonants are affected by the rules which otherwise operate at word boundaries rather than at word/enclitic boundaries. And yet there is no reasonable doubt that the personal pronoun forms here are proclitics, not words, as their forms differ from both the bound stem and the free forms of the personal pronouns and occur only in this morphosyntactic context. Indeed, where the possessor is emphasised, the free and proclitic forms ([aiti] and [ati] respectively below) may co-occur:

(52) [aiti atitaukiramara]
/aiti # ati + tauki-ramara/
we.i # our.i + stay-behave
our way of life

We tentatively conclude, then, that proclitic/word boundaries belong to the same phonological category as boundaries between words.

1.3.4 Mora- and syllable-boundary reassignment

The concatenation of morphemes into strings has consequences not only for segments but for syllables and morae, which may be affected by resyllabification and by mora-assignment.

In general, very little resyllabification occurs. As a result of the concatenation of words and enclitics, the following two-vowel sequences occur across word/enclitic boundaries:

(53)

--	--	--	--	--
ei	ee	ea	--	eu
ai	ae	aa	--	au
oi	oe	oa	--	ou
ui	ue	--	ua	--

Some examples:

(54) [e.ise.a.na]
/e-ise + ana/
he-stand + FUT
he will stand

(55) [i.ra.ro.a.na]
/i-raro + ana/
he-fight + FUT
he will stand

(56) [yo.e]
/yo-e/
woman-PL
women

(57) [i.raa.ka.iŋ]
/i-raa + ka + in/
he-go + NEG + Q
isn't he going?

(58) [fii.iŋ]
/fii + in/
bird + *this*
this bird

The 'holes' in the system in (53) occur for two reasons, firstly, rule G eliminates all sequences beginning with /i/[7]. Secondly, vowel + /o/ sequences do not appear because (a) there are no /o/-initial verb stems with which prefixes would form vowel + /o/ sequences; (b) there are no /o/-initial enclitics which would form vowel + /o/ sequences with vowel-final stems.

Surprisingly, perhaps, syllable boundaries are retained at word/enclitic boundaries, and, unlike vowel sequences within syllables, vowel sequences at syllable boundaries do not form glides but remain in separate syllables, as illustrated in (54-58) above. Hence where sequences of unlike vowels occur both as diphthongs (the upgliding diphthongs and /ua/) and across morpheme boundaries, a contrast occurs. Whereas the diphthong sequences within morphemes are clearly phonetic glides with one syllabic segment (shown under A4), sequences across morpheme boundaries are, at any rate in careful speech, clearly disyllabic. Thus there is a contrast, for example, between[8]:

(59) within a morpheme:

[sa^{u}ki]
/sauki/
woman

and

(60) across a boundary:

[a.uki]
/a-uki/
I descend

Sequences of both of these types contrast with sequences across morpheme-internal syllable boundaries where the two vowels are separated by an approximant:

(61) [ta.wu]
/tawu/
Triton shell

However, sequences of two like vowels across a word/enclitic boundary coalesce to form a single syllabic nucleus, and there is no discernible contrast between these sequences and similar two-vowel sequences within morphemes. Thus:

(62) [ma.na.ma.naa.te]
/manamana + ate/
confused + *and*
confused and then ...

We may formalise this rule as:

H. Syllable boundary loss

$V_i \$ V_i \rightarrow V_iV_i$

after which rule B reapplies.

Since some stems end in long vowels or diphthongs, and one enclitic apparently consists of a long vowel, namely /-aa/ *possessor*, sequences of long vowel + vowel, long vowel + long vowel, and diphthong + long vowel may occur across morpheme boundaries, although none can occur morpheme internally. However, the syllable structure conditions A to A4 operate as usual, giving syllabifications such as the following:

(63) [to.ya.buu.iŋ]
/to + yabuu + in/
earth + *ground* + *this*
this earth

(64) [fu.na.fwee.eŋ]
/funa + fwee + en/
skin + *white* + INS
by the white men

(65) [ben.doo.aa]
/bendoo + aa/
Bendo + PSR
Bendo's

(66) [au.e]
/au + e/
I + PRED
it's me

Non-phonemic epenthetic approximants are liable to occur at syllable boundaries in these sequences in casual speech, e.g. [fu.na.fwee.^{Y}eŋ], [au.^{W}e].

A sequence of two like vowels across a word/enclitic boundary as a part of a sequence like the above may result in syllable boundary reassignment. For example:

(67) [i.ru.aa.na]
/i-rua + anan/
he-hear + FUT
he will hear

In this case, rule H operates causing boundary loss in the sequence [ua.a], giving [uaa]. This is resyllabified in accordance with the syllable structure condition A to give [u.aa]:

I. Syllable boundary reassignment

$V_iV_jV_j \rightarrow V_i \$ V_jV_j$

Mora reassignment occurs in two sets of cases. The first affects CVVC syllables, which are rare and whose origin is not known. Rules A3 and B1 assign three morae to CVVC syllables, but their surface forms have only two morae, i.e., a later reassignment occurs. As examples (68) and (69) show, if the vowels of the CVVC sequence are unlike, i.e. form a glide, the mora is missing from the non-syllabic vowel (cf. rule A5), but if the vowels are like, it is the syllable-final consonant which lacks the mora. If we examine the cases below, we see a motivation for this difference:

(68) 12
[i.kii.kias.si] *he is digging it*

(69) 12
[ga.raan.di] *pandanus*

If we accept that there is a natural tendency to shorten a three-mora syllable like

123 or 123
.kias. .raan.

(or to break it into two syllables), then the presence of a sequence of two like segments ([s.s] in (68), [a.a] in (69)) determines where the mora can*not* be lost since its loss would mean loss of the only feature which distinguishes a sequence of two segments from a single segment, and throws the loss to a position where mora-loss will not result in loss of distinctiveness. However, whilst this quite possibly explains the application of the rule in a number of known cases, it does not provide a rule to cover all cases, as it does not explain mora-loss in, e.g., [wauŋ] *new*, [foiŋ] *night*, [yaiŋ] *intestines*, [maiŋ] *casuarina tree*. In these cases, another explanation is possible, namely that sequences of two unlike vowels retain their morae — and remain in separate syllables — across word/enclitic boundaries, and the retention of the glide by mora-loss in these items ensures their monosyllabicity and therefore their monomorphemic status. The mora-loss rule is stated as:

J. Mora loss

a. $\begin{bmatrix} V \\ -\ \text{syllabic} \end{bmatrix}_i \rightarrow [-\ \text{mora}] \ / \ \left\{ \begin{bmatrix} V \\ +\ \text{syllabic} \end{bmatrix}_j \right\} C \$$

b. $C \rightarrow [-\ \text{mora}] \ / \ V_iV_i\_ \ \$ \ C$

All CVVC syllables with like vowels have a syllable-final nasal consonant: the second part of rule J accounts for this, as syllable structure condition A1 ensures that any non-nasal consonant sequence across syllable boundaries consists of like consonants (e.g., [s.s]) and rule J then reduces any non-nasal CC sequence to a single consonant (e.g., [s]) by removing the distinctive mora. This formulation captures the fact that sequences of two like vowels followed by two like consonants are never found.

The other case of mora reassignment affects the output of rule C. A consequence of rule C is that two two-consonant sequences separated by a vowel may occur across consecutive syllable boundaries. The syllable-final consonant of the second sequence loses its mora, which results effectively in its loss if it is non-nasal:

(70) [i.tat.ta.si]
/i-tar-tar-si/
he-chop-chop-it
he chopped it
i.e., NOT [i.tat.tas.si]

This rule is formalised as:

K. Mora loss 2

C → [- mora] / C $ CV_ $ C

It is interesting to note that rule K evidently results from natural pressures similar to some applications of rule J, namely the need to eliminate sequences of geminate segments.

2. MORPHOLOGY

On structural grounds, Maisin morphemes can be divided into:

(a) stems
(b) affixes
(c) clitics.

Stems either occur free or have affixes attached to them. We can distinguish between stems which are apparently always free (some nouns and adverbs), those which may be free or take affixes (some nouns, adjectives), and those which must have affixes (verbs).

Affixes and clitics differ from each other in that affixes are affixed to a particular class of stem, whereas clitics are attached to a particular class of phrase.

Affixes are either prefixes (marking the subject of the verb) or suffixes (marking the object of the verb, the plural of some human nouns and some adjectives, or the possessor of a body-part (noun).

Almost all clitics are enclitic, i.e., attached to the last item of the phrase. Enclitics attached to noun phrases include the plural marker, demonstratives, the possessor marker, topic markers, and case markers. Enclitics attached to the predicate phrase (verbal or verbless) are tense/aspect markers, the negative and the polar question marker. The only proclitics are the possessive pronouns.

Affixes and clitics resemble each other in that both combine with a stem to form a word, and may undergo phonological processes (see section 1) or morphophonemic changes in the concatenation process. An enclitic may also be attached to a suffix or to a previous enclitic.

The one other morphological process in Maisin is partial reduplication, which marks the progressive aspect of the verb and the plural of a very few human nouns.

The following subsections deal first with the constituents of the noun phrase, then with enclitics to the noun phrase; next with the constituents of the verb phrase, then with enclitics to the noun phrase; and finally with enclitics to the predicate phrase (a predicate phrase may or may not contain a verb phrase). Temporal stems are treated as noun stems, as they may have at least some noun-phrase enclitics attached to them.

2.1 Noun phrase constituents

2.1.1 Nouns

There are four categories of noun:

1. a small number of nouns denoting human beings which have a singular and a plural form;
2. nouns denoting body-parts or relative locations, which obligatorily take a suffix denoting the person and number of the possessor;
3. the majority of nouns, which belong to neither of the above categories and have no inflection;
4. temporal stems, which are probably a subset of the third category, in that their morphological behaviour is similar to that of uninflected nouns.

2.1.1.1 Human nouns with a plural form

This category includes:

(a) nouns which form the plural by adding /-e/[9]:

(71)

Singular	Plural	
tamaati	tamate (G)	*man*
sauki	sauke (G)	*woman*
yaabi	yabe (G)	*father*
faafi	faafe	*husband*
yo	yoe, yose	*mother*
rou	roise	*sister*
yaayesi	yaaye	*nephew*
yaa	yaase	*mother's brother, father's sister*

A historically epenthetic -s- is common at word enclitic boundaries (cf. section 2.2.1), and the -s- of roise *sisters* and yaayesi *nephew* is probably the same one. This implies that yaaye *nephews* is historically the stem and that its -e is not a suffix.

(b) one noun forming its plural by reduplication:

(72)

Singular	Plural	
morobi	momorobi	*daughter*

(c) one suppletive plural form:

(73) teiti — jameŋ (/jamen/) *son*

As well as undergoing rule G, /i/-deletion, most nouns in /-i/ which have a 'long' vowel in their penultimate syllable (e.g. tamaati *man*, yaabi *father*) undergo a minor rule which shortens the 'long' vowel in /i/-final nouns and adjectives when a suffix or enclitic is added, as in:

(74) *man-that*
/tamaati-nen/
tamaati-neŋ — Cl nasal neutralisation
tamati-neŋ — vowel shortening

black + PL + PL
/gambuubi + aa + rii/
gambubi-aa-rii — vowel shortening
gambub-aa-rii — G /i/-deletion

Hence:

Fl. Vowel shortening[10]

$$V_iV_iCi \rightarrow V_iCi\ ]_{N,\ Adj} / \_ \left\{ \begin{matrix} \# \\ + \end{matrix} \right\} X$$

2.1.1.2 Body-part nouns and nouns of location

These nouns are semantically body-part nouns or nouns denoting locations in relation to the human body and other objects. They take the suffixes set out in section 2.1.2, denoting the person and number of the possessor. For example:

(76) kava-u — *mouth-my* — *my mouth*
jir-ati — *head-our.*i — *our* (inc) *heads*

Nouns in this category include:

(77)

mata-	*eye*	kava-	*mouth*
jir-	*head*	kafa-	*chin*
sirava-	*side*	tafa-	*top*
wowo-	*above*	kakko-	*underneath*
tere-	*inside*	kesa-	*head hair*
isu-	*nose*	kari-	*ear*
me-	*tongue*	nua-	*tooth*
iko-	*neck, throat*	fake-	*hand*
tar-	*blood*	ke-	*leg*
kate-	*liver*	te-	*excrement*
tukakki-	*bone*	yain-	*intestines*
suusi-	*breast*	vuvudi-	*hair*
ui-	*vagina*		

3.1.1.3 Other nouns

These nouns are free morphemes, but a number of them undergo phonological changes to their underlying forms when no enclitic is attached. For example:

(78)	/foim/	→	foiŋ	(C3)	*night*
	/yum/	→	yuŋ	(C3)	*water*
	/tum/	→	tuŋ	(C3)	*louse*
	/woyan/	→	woyaŋ	(C3)	*mountain*
	/var/	→	vaa	(C1)	*house*
	/tassar/	→	tassaa	(C1)	*sea*
	/ivar/	→	ivaa	(C1)	*fishnet*
	/angor/	→	aŋgoo	(C1)	*fishtrap*
	/wor/	→	woo	(C1)	*fire*

2.1.1.4 Temporal stems

Temporal stems behave as a subset of noun stems to the extent that their syntactic behaviour is similar to that of uninflected nouns and that certain enclitics to the noun phrase may be attached to them. These enclitics are the future temporal enclitic /-fe/ (section 2.2.1) and those marking information structure (section 2.2.3).

Temporal stems include:

(79)	/afun/	*now, today*
	/roro/	*yesterday*
	/raasi/	*tomorrow*
	/weisi/	*day before yesterday*
	/meeta/	*day after tomorrow*
	/vauvan/	*firstly*

2.1.2 Possessive suffixes

Possessive suffixes are added obligatorily to the nouns listed in section 2.1.1.2. The underlying forms of the suffixes are:

(80)	Singular	Plural
1e	/-u/	/-m/
1i		/-ati/
2	/-m/	/-m/
3	/-r/	/-i/

These forms all remain clearly identifiable when an enclitic is added, as in sirava-u-se, lit. *side-my*-LOC, *beside me*:

(81)	Singular	Plural
1e	/sirava-u-se/	/sirava-n-se/
1i		/sirava-at-e/
2	/sirava-m-e/	/sirava-n-se/
3	/sirava-r-e/	/sirava-i-se/

When no enclitic occurs, phonological and morphophonemic rules apply, as in the paradigm *my eye* etc.:

(82)

	Singular	Plural
1e	matau /mata-u.	mataŋ (C3) /mata-m/
1i	--- ---	mataati /mata-ati/
2	mataŋ (C3) /mata-m/	mataŋ (C3) /mata-m/
3	mataa (C1) /mata-r/	mataa (C1) /mata-i/

When the third person plural suffix /-i/ occurs word finally, it behaves like a consonant /-y/ and rule C1 applies.

2.1.3 Possessor suffixes

The possessor suffix /-aa/ is affixed to a noun denoting a possessor in a possessive noun phrase. For example:

(83) borebaa vaa
boreba-a var
Boreba-PSR *house*
Boreba's house

tamataa vaa
tamaati-aa var
man-PSR *house*
the man's house

2.1.4 Adjectives

Adjectives occur as free morphemes both attributively after a singular noun (e.g. vaa wauŋ, *new house*) and as predicates of topics (e.g. vaa-ka wauŋ, *the house is new*).

Three adjectives have been found with plural forms in /-e/ (like the nouns in section 2.1.1.1):

(84)

Singular	Plural		
raati	raate	(G)	*small*
bejji	bejje-	(G)	*big*
raduu	raduue		*wet*

In the data bejje- always occurs with the plural enclitic /-rii/ attached (section 2.1.5).

Two adjectives with a suppletive or irregular plural form have been found, namely taubaŋ and boresa, both meaning *good*, which share the plural form boregii.

Other adjectives appear to have a plural form, but it is suggested in the next section that these in fact consist of stem + enclitic(s), rather than stem + suffix.

Adjectives include quantifiers and numerals. Quantifiers found in the data are:

(85) seseka *all*
wataa *many*

For example:

(86) kafeeka seseka tikefoti
kafee-ka seseka ti-kefoti
place- all they-occupy
All the seats were occupied.

Numerals include:

(87)

1	sesei	20	tamatisesei *one man*
2	sandei	30	tamatisesei faketi tautau *one man, hands both sides*
3	sinati		
4	fuusese	40	tamatisandei *two men*
5	faketitarosi	60	tamatisinaati *three men*

Other numerals have not been recorded.

2.1.5 Plural enclitics

On noun phrases which include an attributive adjective and on nouns and adjectives serving as the predicate of a plural topic, the plural is indicated by the addition of an enclitic /-aa/ or double enclitic /-aa-rii/. For example:

(88) vaa waunaa
var waun-aa
house new-PL
new houses

vaa airomaa
var airom-aa
house old-PL
old houses

vaaka waunaa
var-ka waun-aa
house-TP *new*-PL
the houses are new

Bendoo Borebai ka katuate tamataari
bendoo boreba-em-ka katuate tamaati-aa-rii
Bendo Boreba-INS-TP *teach man*
Bendo and Boreba are teachers.

The surface form of /-rii/ word finally is often [-ri] rather than expected [-rii]. This morpheme (which is also one of the forms of the verbal suffix for the third person plural object; see section 2.3.3) appears to occur optionally.

Adjectives noted with /-aa/ alone include:

(89)

Singular	Plural	
wauŋ (C3)	waunaa	*new*
airoŋ (C3)	airomaa	*old*
gaboo (C1)	gaboraa	*yellow*
mataakee (C1)	matakeraa	*alive*
fwee	fweeaa	*white*
raduu	raduuaa	*wet*
gambuubi	gambubaa (f1, G)	*black*

Adjectives recorded with /-aa-rii/ include:

(90)

Singular	Plural	
wauŋ (C3)	waunaari	*new*
airoŋ (C3)	airomaari	*old*
sokuŋ (C3)	sokunaari	*narrow*
gaboo (C1)	gaboraari	*yellow*
muu (C1)	muraari	*red*
sii (C1)	sisaari	*bad*
maraffa	maraffaari	*wide*
gambuubi	gambubaari (fl, G)	*black*

A few vowel-final adjectives add /-rii/ directly to a stem-final vowel; in one case, bejje- *big*, the stem already seems to have the plural suffix /-e/ attached (section 2.1.4). All five cases entail irregularities of vowel- or consonant-doubling which are not explained by general phonological rules:

(91)

tufaa	tufari	*short*
rooraa	rorari	*elder*
mossee	moseeri	*long*
raati	rattiri	*younger*
bejji	bejjeeri	*big*

2.1.6 Demonstrative enclitics

There are two demonstrative enclitics:

(92)

/-in/	*this*
/-nen/	*that*

They are attached to either a noun or an adjective, whichever is the later item in the noun phrase (and rule C3 applies to each of them word finally):

(93)

ikosiŋ (fl, G)	ikosineŋ (fl)
ikoosi-in	ikoosi-nen
coconut-this	*coconut-that*
this coconut	*that coconut*
variŋ (fl, G)	vaaneŋ (C1)
var-in	var-nen
house-this	*house-that*
this house	*that house*

These two enclitics also occur in pronominal forms:

(94)

in-naŋ	*this one*
nen-naŋ	*that one*
neen-iŋ	*this (thing, matter)*
neen-neŋ	*that (thing, matter)*

/in/ occurs in inna *now* (*this*-TP), /nen/ in neŋke *there* (/nen-e/ *that*-LOC).

Of the two enclitics, /-nen/ occurs with much greater frequency: it is the unmarked member of the pair, and is used with little deictic force as a clause nominaliser (see section 3.3.4).

2.1.7 Personal pronouns

Personal pronouns occur in three environments:

(a) as free pronouns;
(b) as proclitics in possessive noun phrases, e.g.,

(95) aiti atitaukiramara
aiti aiti + tauki-ramara
*we.*i *our.*i + *stay-behave*
our way of life

wowo arikaa
wowo air + kaa
topside his + *canoe*
aircraft

yaa arisiraraa
yaa air + sirara-r
sun his + *light-his*
the sun's light

(c) as bound stems with enclitics added, e.g.,

(96) aire
air + e
he + PRED
it's him

aaso
au + so
I + REF
for me, about me

Only three free forms have been recorded: potentially free personal pronouns almost always have a topic-marker or other enclitic attached, and therefore assume the bound stem form. Thus *he* occurs in the data as aika *he*-TP, or as airo *he only*, but never as a free form.

The apparent underlying forms, the free forms, and the bound forms are as follows:

(97)

		Underlying	Free	Proclitic	Stem
Sing.	1	/au/	au	au	aa-
	2	/ai/		ai	ee-
	3	/air/		ari	ai-, air-
Plur.	1e	/am/		aŋ	aŋ-
	1i	/aiti/	aiti	ati	aiti-
	2	/em/		eŋ	eŋ-
	3	/ei/	ei	ei	ei-

The derivation of some free and bound forms from the corresponding underlying forms is somewhat irregular. Underlying forms are largely inferred from forms with the predicate marker /-e/ attached (au-e *it's me*, air-e *it's him*, ei-e *it's them* etc.).

2.2 Enclitics to the noun phrase

Enclitics to the noun phrase indicate the syntactic relationship of the noun phrase to the other constituents of its clause. They fall into three classes:

(a) case-markers, expressing relationships such as location, instrument, beneficiary and so on;
(b) the predicate marker /-e/;
(c) information-structure markers, indicating whether the information expressed in the noun phrase is topic or focus.

2.2.1 Case-markers

Seven case-markers have been identified:

(98)
/-e/	locative
/-efe/	ablative
/-em/	instrumental
/-so/	referential
/-fe/	future temporal
/-kam/	possessive
/-tom/	accompaniment

The locative case-marker /-e/ marks a location, a direction towards which movement occurs, or a past time:

(99) ee neŋke yabu gaure titaukeeme
ee nen-e yabuu gaur-e ti-taukee-me
yonder that-LOC *ground hole*-LOC *they-stay*.PG-PAST
So they lived there in a cave in the ground.

(100) vauvaŋka dooguraefe wowo arikaaseŋ aawo Alotaue
vauvan-ka doogura-efe wowo ari-kaa-em a-awo alotau-e
first-TP *Dogura*-ABL *topside its-canoe*-INS *I-cross Alotau*-LOC
Firstly, I went in a plane from Dogura to Alotau.

(101) Bendooka foime irai
bendoo-ka foim-e i-rai
Bendo-TP *night*-LOC *he-come*
Bendo came in the night.

The ablative case-marker /-efe/ marks the place from which movement occurs, as in (100).

The instrumental case-marker /-em/ marks an instrument used to perform an action:

(102) Jonika manaana ivareŋ iwawe
joni-ka manaa-na ivar-em i-wawe
John-TP *fish*-FC *net*-INS *he-catch*
John caught fish with a net.

It may also be used to mark the agent subject of a verb:

(103) tamateŋ itaruwuggureŋ
tamaati-em i-taru-wur-wur-ren
man-INS *he*-PREF-PG-*hit-me*
The man is hitting me.

and as a link between two noun phrases:

(104) Bendoo Borebaeŋka katuate tamataari
bendoo boreba-em-ka katuate tamati-aa-rii
Bendo Boreba-INS-TP *teach man*-PL-PL
Bendo and Boreba are teachers.

The function of the referential case-marker /-so/ is less easily defined: it marks a noun phrase which is less directly related to the verb. This may be the beneficiary:

(105) Bendoo Borebaso ikosina imeŋ
bendoo boreba-so ikoosi-na i-me-n
Bendo Boreba-REF *coconut*-FC *he-give-him*
Bendo gave Boreba a coconut.

(106) Bendoo manaana aaso ive irai
bendoo manaa-na au-so i-ve-n i-rai
Bendo fish-FC *me*-REF *he-bring-it he-come*
Bendo brought me a fish.

It may be a goal:

(107) kefeeso tekikirame
kefee-so te-ki-kira-me
place-REF *they*-PREF-*look*-PAST
They were looking for a place (to live).

(108) mee ikanate aisoka kutaraŋ
mee i-kan-ate air-so-ka ku-tara-n
banana he-eat-and he-REF-TP *you-call-him*
He ate a banana and then you called him.

It may be the topic of conversation:

(109) eeso amai avasu teifana kumatana
ai-so amai avasu te-ifa-anan ku-mati-anan
you.sg-REF *just voice just how they-speak*-FUT *you*.sg-*die*-FUT
If they just talked somehow about you, you would die.

Or it may be the reason:

(110) avanso irai
avan-so i-rai
what-REF *he-come*
Why did he come?

(111) neŋso neŋke tivaame
nen-so nen-e ti-vaa-me
that-REF *that*-LOC *they-land*-PAST
For that reason they landed there.

The future temporal marker occurs more widely as an enclitic to verb phrases (see section 2.1.4.2), but also functions as case-marker in certain temporal phrases, e.g. foiŋfe in:

(112) Bendoo foiŋfe iraana
bendoo foim-fe i-ra-anan
Bendo night-F *he-come*-FUT
Bendo will come tonight.

The possessive case-marker /-kam/ occurs in anaphoric possessive noun phrases, e.g.,

(113) ikosi ka Borebakaŋ
ikoosi-in-ka boreba-kam
coconut-this-TP *Boreba*-POSS
This coconut is Boreba's.

where Borebakaŋ *Boreba's* refers anaphorically to *Boreba's coconut.*

The accompaniment case-marker /-tom/ is used, like the instrumental case-marker /-em/, as a link between two noun phrases:

(114) aaka kukuŋ kuuta vauno meetoŋ aŋkaŋ
au-ka kukun kuuta vauno mee-tom a-kan-kan
I-TP *taro yam as.well banana*-ACC *I*-PG-*eat*
I am eating taro, yam and banana.

It also commonly marks ownership:

(115) eika sikootoŋ
ei-ka sikoo-tom
they-TP *pig*-ACC
They have a pig (lit. *They with pig*).

Its force in the following example is close to that of the instrumental enclitic:

(116) funafwee eifonaton tive teifa
funa-fwee ei-fona-tom ti-ve te-ifa
skin-white their-voice-ACC *they-get they-speak*
They borrow (words) from the whiteskins' language.

A case-marker is always attached to the last item of a noun phrase (but may be followed by an information-structure marker). Thus:

(117) vare BUT: vaa nombore
var-e var nombor-e
house-LOC *house big*-LOC
at the house *at the big house*

Two morphophonemic changes operate on the enclitics /-e/, /-efe/ and /-em/. The first is that where one of these enclitics is added to a sequence of C_OVN or C_OVV, or to the plural suffix /-e/ (cf. section 2.1.1.1) or the pronoun stem /aiti/ *second person plural*, an epenthetic [-s-] is inserted, as in the examples below and the pronouns in (121):

(118) woyanse
woyan-s-e
mountain-[s]-LOC
on the mountain

vaa waunaase
var waun-aa-s-e
house new-PL-[s]-LOC
in the new houses

vaa airomaariise
var airom-aa-rii-s-e
house new-PL-PL-[s]-LOC
in the old houses

keuseŋ
ke-u-s-em
leg-my-[s]-INS
with my foot

tamateseŋ
tamaati-e-s-em
man-PL-[s]-INS
by the men

However, four morphemes with a sequence C_oVN, namely /-in-/ *this*, /-nen-/ *that*, /avan/ *which?* and /man/ *what?*, instead insert [-k-]:

(119) variŋke
var-in-k-e
house-this-[k]-LOC
in this house

vaaneŋke
var-nen-k-e
house-that-[k]-LOC
in that house

avaŋke
avan-k-em
which-[k]-INS
what with?

maŋke
man-k-e
what-[k]-LOC
where?

This rule is formalised as:

b2. Consonant epenthesis

$$\emptyset \rightarrow \left\{ \begin{array}{l} [k] \; / \; \left\{ \begin{array}{ll} \text{avan} & \textit{what?} \\ \text{man} & \textit{which?} \\ \text{in} & \textit{this} \\ \text{nen} & \textit{that} \end{array} \right\} \\ [s] \; / \; \left\{ \begin{array}{l} C_oVN \\ C_oVC \\ \text{aiti } \textit{you.}\text{PL} \\ \text{e]}_{PL} \end{array} \right\} \end{array} \right\} \; / \; \underline{\quad} \; \begin{array}{l} \text{CASE-} \\ \text{MARKER} \end{array} \; [\text{-e\_}$$

When the markers /-e/ 'locative' and /-efe/ 'ablative' are joined to a human noun or a personal pronoun, the possessor enclitic /-kam/ intervenes after the noun or pronoun:

(120) ariyaabikame itaisukki
ari-yaabi-kam-e i-taisukki
his-father-PSR-LOC *he-run*
He ran to his father.

The concatenation of case-markers with personal pronoun stems entails some irregularities (the pronoun stems are described in section 2.1.7):

(121)

		-so	-kam	-e	-efe	-em
Sing.	1	aaso	aaka	aakame	aakamefe	aaseŋ
	2	eeso	eeka	eekame	eekamefe	eeseŋ
	3	aiso	aika	aikame	aikamefe	aireŋ
Plur.	1e	aŋso	aŋkaŋ	aŋkame	aŋkamefe	aŋseŋ
	1i	aitiso	aitikaŋ	aitimake	aitikamefe	aitiseŋ
	2	eŋso	eŋka	eŋkame	eŋkamefe	eŋseŋ
	3	eiso	eikaŋ	eikame	eikamefe	eiseŋ

2.2.2 The predicate marker

The predicate marker /-e/ is added to a noun phrase which serves as a predicate in an equative clause (section 3.2.1.3):

(122) aue
au-e
I-PRED
it's me

(123) varea serae
var-e-a sera-e
house-LOC-TQ *who*-PRED
who is it in the house?

(124) tamatinenso kaa aasineŋka bendoe
tamaati-nen-so kaa a-asi nen-ka bendoo-e
man-that-REF *canoe I-paddle that*-TP *Bendo*-PRED
The man for whom I paddled the canoe is Bendo.

2.2.3 Information-structure markers

There are three, possibly four, information-structure markers:

(125) /-ka/ topic marker
/-a/ interrogative topic marker
/-na/ focus marker

The enclitic /-ro/ appears to be an emphatic topic marker.

The information-structure markers are treated separately from case-markers on both functional and distributional grounds. The topic markers occupy a slot immediately following any case-marker. The focus marker never co-occurs with a case-marker, but has a clear paradigmatic relationship, described in section 3.2.2, with the topic markers. Information-structure markers are enclitics and combine with the last item of the noun phrase, case-marked or otherwise:

(126)

ivaaka	ivar-ka	*net*-TP
ivaana	ivar-na	*net*-FC
ivara	ivar-a	*net*-TQ
ikosika	ikoosi-ka	*coconut*-TP
ikosineŋka	ikoosi-nen-ka	*coconut-that*-FC
ikosina	ikoosi-na	*coconut*-FC
kosinenna	ikoosi-nen-na	*coconut-that*-FC
ikosa	ikoosi-a	*coconut*-TQ
vareka	var-e-ka	*house*-LOC-TP
varea	var-e-a	*house*-LOC-TQ

Information-structure markers are attached to the same personal pronoun stem forms as case-markers, e.g. aaka *I*-TP, aaro *I*-ETP.

2.3 Verb phrase constituents

2.3.1 Verb stems

Verb stems usually occur with a subject prefix attached, and frequently with other morphemes too. Each stem is classified on morphological grounds in three ways:

(a) according to the way in which it combines with subject prefixes:

(i) consonant-initial (section 2.3.2.1);
(ii) /ka/-initial and /ki/-initial (section 2.3.2.2);
(iii) vowel-initial and /kV/-prefixed (section 2.3.2.3);

(b) according to transitivity and to the way in which it combines with object-suffixes:

(i) intransitive;
(ii) transitive, vowel-final (section 2.3.3.1);
(iii) transitive, consonant-final (section 2.3.3.2);

(c) according to the way in which it forms the progressive aspect:

(i) CV-reduplication (section 2.3.4.1);
(ii) CVC-reduplication (section 2.3.4.2);
(iii) irregular (section 2.3.4.3);

As this classification indicates, the verb is by far the most complex item in Maisin morphology, and there are certainly complexities only parts of which are visible in our data. One area of complexity is the verb stem. There are some stems, the first syllable (or first two syllables) of which do not participate in progressive aspect reduplication; instead, reduplication affects the second syllable, suggesting that the first syllable was or is a prefix to the stem, perhaps of a kind common in the Austronesian languages of the Milne Bay Province of Papua New Guinea, namely the classificatory prefix described by Ezard (1978). Some of these prefixed stems take the set of subject prefixes otherwise used with vowel-initial stems (cf. section 2.3.2.3). Prefixed stems include:

(127)

/ke-sev/	*split*
/ki-siran/	*shine*
/ki-sisi/	*shine*
/ko-va/	*sew*
/ku-ture/	*push*
/ka-tuatte/	*teach*
/kai-to/	*cut*
/ra-meati/	*pull*
/ra-veresi/	*turn itself*
/tai-sukki/	*run*
/rabu-jeje/	*tear*
/taru-wur/	*hit*

Certain stems are clearly compound in that they consist of two simple stems:

(128) arauku
a-ra-uku
I-come-descend
I came down, I landed (in an aircraft)

from /ra/ *come* and /uku/ *descend*, and

(129) tekiravaasi
te-kira-vaasi
they-look-ascend
they looked upwards

from /kira/ *look* and /vaasi/ *ascend*. It is probable that there are many other yet to be recognised such compounds.

2.3.2 Subject prefixes

The underlying forms of the subject prefixes are:

(130)

	Singular	Plural
1e	/a-/	/ka-/
1i		/ta-/
2	/ku/	/ku-/
3	/i-/	/ti-/

They combine with verb stems in three different ways, as noted under (a) in the section above.

2.3.2.1 Subject prefixes with consonant-initial stems

Subject prefixes attached to consonant-initial stems retain the forms given above:

(131)

amatu	kumatu	imatu	timatu
a-matu	ku-matu	i-matu	ti-matu
I-sleep	*you.sg-sleep*	*he-sleep*	*they-sleep*
I slept	*you slept*	*he slept*	*they slept*

2.3.2.2 Subject prefixes with /ka/-initial and /ki/-initial stems

Certain stems with initial /ka-/ and /ki-/ undergo special morphophonemic changes when the subject prefixes are attached to them. These special changes are:

b3. Stem-initial /k/-deletion

$$k \rightarrow \emptyset \;/\; \left\{ \begin{matrix} a \\ u \end{matrix} \right\}]_{SP} + \_\_ \; STEM\,[\left\{ \begin{matrix} a \\ i \end{matrix} \right\}$$

b4. Verb-initial vowel-reduction

$$V_i \rightarrow \emptyset \;/\; \_\_\,]_{SP} + STEM\,[V_i$$

jl. Subject-prefix reduction

$$\begin{bmatrix} C \\ +\text{stop} \\ \text{vel place} \end{bmatrix} [\,V\,] \rightarrow \begin{bmatrix} C \\ +\text{stop} \\ \text{vel place} \\ +\text{round} \end{bmatrix} / \_\_ \,]_{SP\,-\,STEM} [\,V$$

i.e., stem-initial /k-/ is deleted after prefix vowels /-a-/ and /-u/ (but not /-i-/). Any resulting double vowel is reduced to a single segment, and a resulting /kuV/ is reduced to [kwV]. For example:

(132)

I ate	*you ate*		
/a-kan/	/ku-kan/		
a-an	ku-an	b3	stem-initial /k/-deletion
an	--	b3	verb-initial vowel reduction
aŋ	kuaŋ	C3	nasal neutralisation
--	kwaŋ	jl	subject prefix reduction

(133)

I laughed	*you laughed*		
/a-kiro/	/ku-kiro/		
airo	kuiro	b3	stem-initial /k/-deletion
--	kwiro	jl	subject prefix reduction

The resulting verb paradigms are illustrated by:

(134)

	I ate etc.		*I laughed* etc.	
	Singular	Plural	Singular	Plural
le	aŋ	kaŋ	airo	kairo
li		taŋ		tairo
2	kawŋ	kwaŋ	kwiro	kwiro
3	ikaŋ	tikaŋ	ikiro	tikiro

The same rules operate on the progressive aspect (section 2.3.4):

(135)

I am eating	*you are eating*		
/a-kan-kan/	/ku-kan-kan/		
a-an-kan	ku-an-kan	b3	stem-initial /k/-deletion
an-kan	--	b4	verb-initial vowel reduction
aŋkan	kuaŋkan	C2	nasal assimilation
aŋkaŋ	kuaŋkaŋ	C3	nasal neutralisation
__ reduction	kwaŋkaŋ	jl	subject prefix

(136)

I am laughing	*you are laughing*		
/a-kii-kiro/	/ku-kii-kiro/		
a-ii-kiro	ku-ii-kiro	b3	stem-initial /k/-deletion
__	kwiikiro	jl	subject prefix reduction

The resulting paradigms are:

(137)

	I am eating etc.		*I am laughing* etc.	
	Singular	Plural	Singular	Plural
le	aŋkaŋ	kaŋkaŋ	aiikiro	kaiikiro
li		taŋkaŋ		taiikiro
2	kwaŋka	kwaŋka	kwiikiro	kwiikiro
3	ikaŋkaŋ	tikaŋkaŋ	ikiikiro	tikiiro

Other stems in the /ka/-initial and /ki/-initial class are:

/ka/-initial:		/ki/-initial:	
/i-kas-/	*he baked*	/i-kiru-/	*he squeezed*
/i-katuatte-/	*he taught*	/i-kite-/	*he saw*
/i-kari/	*he scratched*		

The stem /kite/ *see* gives rise to /i-kit-ti/[11] *he saw it* etc.,

(138) *I saw it*
/a-kite-si/

a-kit-si		anomalous /e/-deletion (see 2.3.3.1)
a-kit-ti	b6	/s/-assimilation (see 2.3.3.1)
a-it-ti	j2	stem-initial /k/-deletion
atti		special /i/-deletion

The paradigm for the simple aspect of ikitti *he saw it*, which is otherwise generated like that of ikiro *he laughed* above, is:

(139)

	Singular	Plural
le	atti	katti
li	--	tatti
2	kwitti	kwitti
3	ikitti	tikitti

2.3.2.3 Subject prefixes with vowel-initial and /kV/-prefixed stems

This small group of verb stems includes those with an initial vowel, and those with an initial /k-/ which differs in behaviour from the /k/-initial stems in section 2.3.2.1 above.

Strictly speaking this initial /k-/ does not belong to the stem but to a fossilised prefix, since the syllable /kV-/ does not participate in the reduplication of these stems (section 2.3.4.1).

The morphological characteristic of this class of stem is that prefix vowels lose their height, i.e., /ku-/, /i-/ and /ti-/ become respectively ko, e, and te:

b5. Prefix-vowel lowering:

$$[+\text{ high}] \rightarrow [-\text{ high}] \;/\; \_\_]_{SP} - \left\{ \begin{matrix} V \\ kV- \end{matrix} \right]_{\substack{STEM \\ SP}} \right\}$$

Representative paradigms are, for vowel-initial stems, eise *he walked* and, for /kV/-prefixed stems, ekesessi *he split it*

(140)

		I walked etc.	*I split it* etc.
Sing.	1	aise	akesessi
	2	koise	kokesessi
	3	eise	ekesessi
Plur.	le	kaise	kakesessi
	li	taise	takesessi
	2	koise	kokesessi
	3	teise	tekesessi

Verbs with vowel-initial stems include:

(141)

eise	*he walked*
eise	*he stood*
eukaa	*he went down*
euki	*he landed*

The verbs eise *he walked* and eise *he stood* are identical in conjugation in their unreduplicated forms.

Verbs with /kV/-prefix stems include:

(142)

ekisiran	*it shone*
ekisisi	*it shone*
ekuture	*he pushed*
ekovaŋ	*he sews it*
ekko	*he shot*
ekakki	*he combed*
ekakkeŋ	*he burned it*
ekakko	*he breathed*
ekakkosi	*he stabbed it*
ekute	*he asked*

Other vowel-initial stems are odd in various ways. The verbs eifa *he spoke* and ee *he went* are conjugated as follows:

(143)

		I spoke etc.	*I went* etc.
Sing.	1	aafi	aa
	2	kweefi	koo
	3	eefi	ee
Plur.	1e	kaafi	kaa
	1i	taafi	taa
	2	kweefi	koo
	3	teefi	tee

Both these verbs seem partly or completely to assimilate the stem-initial vowel to the prefix vowel. Their (irregular) progressive aspect forms (section 2.3.4.3) point to probable underlying stem forms /ifi/ and /ar/ (cf. also eerana *he will go*, where stem-final /r/ is preserved). Hence the derivation of their forms seems to be as follows:

(144)

I spoke	*you spoke*	*he spoke*		
/a-ifi/	/ku-ifi/	/i-ifi/		
--	ko-ifi	e-ifi	b5	prefix vowel lowering
aafi	ko-efi	eefi		vowel assimilation
--	kwefi	--	j1	subject prefix reduction
--	kweefi	--		vowel-lengthening (by analogy with eefi ?)

(145)

I went	*you went*	*he went*		
/a-ar/	/ku-ar/	/i-ar/		
--	ko-ar	e-ar	b5	prefix vowel lowering
--	ko-or	e-er		vowel assimilation
aa	koo	ee	C1	non-nasal neutralisation

2.3.3 Object suffixes

The underlying forms of the object suffixes are:

(146)

	Singular	Plural	
le	/-ren/	/-ren/	
li	--	/-reti/	
2	/-ren/	/-ren/	
3	/-n/	/-rii/	(vowel-final stems)
	/-Ø/	/-Ø/	
	/-si/		
3	/-si/	/-ii/	(consonant-initial stems)

These suffixes are joined directly to a transitive verb stem, and precede any enclitic. In terms of morphophonemic changes, they are also prior to progressive aspect reduplication (section 2.3.4), i.e., they are already present in the form on which reduplication rules operate.

Object suffixes differ in the third person, as the table shows, according to whether the stem ends in a vowel or a consonant.

Third person plural suffixes /-rii/ and /-ii/ are reduced to [-ri] and [-i] respectively if they are word final.

2.3.3.1 Object suffixes on vowel-final stems

There appears to be no rule which will enable us to predict which third person suffixes a vowel-final stem will take, although it appears that if a stem takes singular /-si/, plural will be /-Ø/, and if it takes plural /-rii/, singular will be /-n/. The various permutations of suffixes are illustrated below (/-reti/ forms are always predictable from /-ren/ forms):

(147)

	1/2	3sg	3pl	
stem	/-ren/	/-n/	/-Ø/	
/tama/	itamareŋ	itamaŋ	itama	*wash*
/kai-to/	ikaitoreŋ	ikaitoŋ	ikaito	*cut*
/ku-ture/	ekutureŋ	ekutureŋ	ekuture[12]	*push*
stem	/-ren/	/-si/	/-Ø/	
/kko/	ekkoreŋ	ekkosi	ekko	*shoot*
/fune/	ifunereŋ	ifunesi	ifune	*butcher*
/kite/	ikitereŋ	ikitti	ikite	*see*
stem	/-ren/	/-n/	/-rii/	
/kova/	ekovareŋ	ekova	ekovari	*sew*
/ka-tuatte/	ikatuattereŋ	ikatuatte	ikatuatteri	*teach*
/yasi/	iyasireŋ	iyasi	iyasiri	*open*
stem	/-ren/	/-Ø/	/-Ø/	
/wawe/	iwawereŋ	iwawe	iwawe	*carry*
/fifi/	ififireŋ	ififi	ififi	*chop*

Where a stem is hyphenated, e.g. /ku-ture/, this indicates that /ku-/ is a fossilised prefix (see sections 2.3.2.3 and 2.3.4.1).

The form ikitti *he saw it* above entails the unpredictable deletion of /-e/ from the stem /kite/, a deletion which occurs only before the third person singular object suffix /-si/. It also illustrates progressive /s/-assimilation, whereby the object suffix /-si/ becomes /-ti/ after a stem-final /t/ (where the operation of regressive assimilation in accordance with rule C would otherwise be expected):

b6. Progressive /s/-assimilation

$$/s/ \rightarrow t \;/\; t\,]_{STEM} + {}_{OS}[\;\_\_i$$

The derivation of ikitti is thus:

(148) *he saw it*

/i-kite-si/		
i-kit-si		anomalous /e/-deletion
ikitti	b6	/s/-assimilation

2.3.3.2 Object suffixes on consonant-final stems

When the suffixes are added to a consonant-final stem, an epenthetic [-e-] is inserted between the stem-final consonant and /-ren/ or /-reti/, unless that consonant is /-r/, in which case it is lost. Forms with /-si/ are affected by rules b6, C, E and F. For example:

(149) *he chopped it*

/i-tar-si/		
itassi	C	non-nasal assimilation

(150) *he tied it*

/i-rot-si/		
irotti	b6	/s/-assimilation

The paradigm of object suffixes on consonant-final stems is illustrated below:

(151)

stem	1/2 /-ren/	3sg /-si/	3pl /-ii/	
/tar/	itareŋ	itassi (C)	itari	*chop*
/taru-wur/	itaruwureŋ	itaruwussi (C)	itaruwuri	*hit*
/ke-sev/	ekesevereŋ	ekesessi (C)	ekesevi	*split*
/rot/	irotereŋ	irotti (b6)	iroti	*tie*
/mayat/	imayatereŋ	imayatti (b6)	imayati	*trap*
/re-meat/	irameatereŋ	irameatti (b6)	irameati	*pull*
/yom/	iyomereŋ	iyoŋsi (E, F)	iyomi	*hide*

One stem conforms to neither vowel-final nor consonant-final patterns:

(152)	/me/	imeŋ	imeŋ	imei	*give*

whilst one has what appear to be, synchronically at least, suppletive stems:

(153)	/ne/	--	inei	inane	*do*

2.3.4 Progressive aspect reduplication

The progressive aspect is formed in most verbs by partially reduplicating the stem. For this purpose, stems are classified as CV-reduplicating, CVC-reduplicating, and irregular. There is no absolute criterion for predicting

whether a stem is CV- or CVC-reduplicating, but in general stems with an underlying form /CVC/ are CVC-reduplicating, and others (those with an underlying form of or beginning with the shape /CVCV/ or /CVV/) are CV-reduplicating. This division does not correspond exactly to that between vowel-final and consonant-final stems made in section 2.3.3.

2.3.4.1 CV-reduplication

The morphological rule for CV-reduplication is:

(154) $C_iV_i(V_i)$ X → $C_iV_iV_i$ \$ C_iV_i X

Examples, with third person singular prefixes, are:

(155)	stem	Simple	Progressive	
	/matu/	imatu	imaamatu	*sleep*
	/rua/	irua	iruurua	*hear*
	/yee/	iyee	iyeeye	*swim*
	/wosiki/	iwosiki	iwoowosiki	*sneeze*
	/kiro/	ikiro	ikiikiro	*laugh*
	/mave/	imave	imaamave	*yawn*
	/suusi/	isuusi	isuususi	*suck*
	/maati/	imaati	imaamati	*die*
	/me/	imeŋ	imeemeŋ	*give him*
	/tama/	itamaŋ	itaatamaŋ	*wash him*
	/wa/	iwa	iwaawa	*plant*

Three modified forms of CV-reduplication occur. In the first, the unreduplicated stem already has two successive syllables with the same consonant, e.g., /raro/ *fight*. Application of the normal rule would give *iraararo *he is fighting*, but Maisin apparently eschews three successive syllables with the same consonant, and haplology eliminates the second, leaving progressive iraaro. Hence the rule here is:

(156) C_iV_i \$ $C_iV_j(V_j)$ \$ (X)

→ $C_iV_iV_i$ \$ C_iV_j \$ (X)

For example:

(157)				
	/raro/	iraro	iraaro	*fight*
	/vavi/	ivavi	ivaavi	*boil them*
	/nane/	inane	inaane	*do them*
	/wawe/	iwawe	iwaawe	*carry*
	/fifi/	ififi	ifiifi	*chop*
	/yoyoki/	iyoyoki	iyooyoki	*shake them*

A similar but anomalous verb is:

(158)				
	/tesi/	itesi	iteesi	*weep*

where the consonants differ in manner of articulation.

The second modification involves certain stems of three syllables or more where the first (or first and second) syllable is apparently a fossilised prefix, and reduplication occurs in the first syllable of the original stem. The change in such stems is:

(159) $C_iV_i(V)\ \$\ C_jV_j(V_j)\ \$\ X$

$\rightarrow\ C_iV_iV_i\ \$\ C_jV_jV_j\ \$\ C_jV_j\ \$\ X$

For example:

(160)	/ke-sev/	ekesessi	ekeseesessi	*split it*
	/ki-siran/	ekisiraŋ	ikisiisiraŋ	*shine*
	/ku-ture/	ekuture	ekukuuture	*push*
	/ka-tuatte	ikatuatteri	ikatuutuatteri	*teach them*
	/ra-meati/	irameati	irameemeati	*pull*
	/ra-veresi/	iraveresiŋ	iraveeveresiŋ	*turn itself*
	/tai-sukki/	itaisukki	itasuusukki	*run*
	/kai-to/	ikaitoŋ	ikatootoŋ	*cut it*

One verb shows both haplology and a prefix:

(161)	/rabu-jeje/	irabujeje	irabujeeje	*tear*

In the third modification, the reduplication has only a single vowel, apparently when the stem is CVV-initial:

(162)	/rai/	irai	iraraa	*come*
	/vaa/	ivaa	ivavaa	*go up, land*
	/vaasi/	ivaasi	ivavaasi	*ascend, climb up*

In the case of /tauki/ *stay*, vowel reduction affects the stem, not the reduplication:

(163)	/tauki/	itauki	itautoki	*stay*

2.3.4.2 CVC-reduplication

The effects of CVC-reduplication are often quite complex. The basic morphological rule is as follows:

(164) $C_iC_iC_j\ \$\ X \rightarrow C_iC_iC_j\ \$\ C_iV_iC_j\ \$\ X$

For example:

(165)	stem	Simple	Progressive	
	/kan/	/ikaŋ	ikaŋkaŋ (C2, C3)	*eat*
	/kum/	/ikuŋ	ikuŋkuŋ (C2, C3)	*drink*

However, in many cases rule C intervenes, so that we find:

(166)	/fune/	ifune	ifuffune	*butcher*
	/tar/	itari	itattari	*chop them*

The majority of verbs affected by CVC-reduplication are transitive and therefore take an object suffix like the last example above. This may result, through the operation of rule C, in a sequence of two double consonants at successive syllable boundaries, the second of which is reduced by rule L:

(167)	Simple	Progressive	
	i-tar-si	i-tar-tar-si	*chop it*
	itassi	i-tat-tas-si	C non-nasal assimilation
	--	itattasi	L mora-reduction 2

The application of general phonological processes in cases of progressive aspect reduplication was illustrated in section 1.3.3 above.

2.3.4.3 Irregular progressive aspect reduplication

A number of common verbs form their progressive aspect in an irregular manner. The first of these has a /kV/-prefixed stem:

(168)	stem	Simple	Progressive	
	/k-ko/	ekko	ekakko	*shoot*

Four have vowel-initial stems:

(169)				
	/ise/	eise	esese	*walk*
	/ise/	eise	eisee	*stand*
	/ar/	ee	iraa	*go*
	/ifi/	eefi	ifaafi	*tell* (cf. /ifa/ *speak*)

The progressive aspect form of /ifi/ appears to be made up of the morphologically related stems /ifa/ *speak* and /ifi/ *tell*, with the initial /i-/ of /ifi/ assimilated to the previous /a-/ in the same way as it assimilated to the vowel of a subject prefix (section 2.3.2.3).

The last two are consonant initial:

(170)				
	/nei/	inei	inaŋ	*do it*
	/tauki/	tauki	taukee	*stay*

The stem /tauki/ *stay* thus has two progressive forms, and there appears to be a semantic difference between them: tautoki (see section 2.3.4.1) is used in the inchoative sense of *settle, establish a home*, taukee in the durative sense of *stay for a period of time* or *live (in a place)*. It also seems possible that the semantically related progressive forms eisee *he stands* and itaukee *he stays* may have arisen through the same morphological process, giving final [-ee].

2.4 Enclitics to the predicate phrase

This section is entitled 'enclitics to the predicate phrase' rather than 'enclitics to the verb phrase' because several of the enclitics discussed here may be attached to the final morpheme of whatever phrase serves as the predicate of the clause, whether it is a verb phrase, a noun phrase, an adjectival phrase or an adverbial phrase.

For almost all the data it is sufficient to recognise three post-predicate enclitic slots (excluding cases where a clause is nominalised with /nen/ and then has enclitics added to it as a noun phrase), any of which may be empty, and the first of which is occupied by a tense/aspect-marking enclitic, the second by the conjunction /ate/, the demonstrative /nen/ as a nominaliser, or the negative /-ka/, and the third by the polar interrogative /-in/. Only one case has been found where two consecutive tense/aspect-marking enclitics occur, and this is in Capell's (1976:558) data; it was accepted by my informant, but no other parallel examples could be elicited. The example is[13]:

(171) ifeemeakafemate keisi
i-fee-me-akafem-ate keisi
he-fall-PAST-CFAC-*and no*
He could have fallen but he didn't.

2.4.1 Tense/aspect-marking enclitics

The tense/aspect-marking enclitics fall into two categories, corresponding to the final and medial verbal affixes of Trans-New Guinea Phylum languages (Longacre 1972:4 and passim). 'Final' tense/aspect-marking enclitics indicate the tense/aspect of the predicate, and occur either sentence finally (as Maisin clauses are usually predicate final) or followed by a conjunction. 'Medial' tense/aspect-marking enclitics indicate the relationship of the verb to the following verb, and provide more limited tense/aspect information than 'final' enclitics do.

2.4.1.1 'Final' tense/aspect-marking enclitics

Five 'final' tense/aspect-marking enclitics have been found:

(172)

/-anan/	future
/-me/	past
/-aka/	potential
/-akafem/	counterfactual
/-ateene/	counterfactual past

To these we should add a sixth, the 'zero enclitic', which indicates non-future. All except the counterfactual past enclitic have been found with both the simple and the progressive aspect (reduplicated) forms of the verb (section 2.3.4).

The difference between the simple and progressive aspect forms is basically the difference between completion and non-completion, and with the non-future 'zero enclitic' this is interpreted as past or present according to context. Thus the simple form without an enclitic is the usual 'final' verb form in narrative:

(173)

Bendooka	foime	irai
bendoo-ka	foim-e	i-rai
Bendo-TP	*night*-LOC	*he-come*

Bendo came in the night.

In practice a 'final' verb rarely occurs in narrative without some other verb form preceding it. The following example includes a 'medial' verb (teukun) before the 'final' verb of the first sentence, tira *they came*:

(174)

muusa	yuume	teukun	tira.
muusa	yum-e	te-uku-n	ti-ra
Musa	*water*-LOC	*they-descend-ing*	*they-come*

They came down to the Musa river.

foorue	tirauku
fooru-e	ti-ra-uku
Foru-LOC	*they-come-descend*

They arrived at Foru.

neŋke	saane	tuufi	inyovere	neŋke	baŋgi
nen-e	saan-e	tuufi	in-yove-r-e	nen-e	bangi
that-LOC	*beach*-LOC	*Tufi*	*this-side-his*-LOC	*that*-LOC	*raft*

tiroti.	
ti-rot-ii	
they-tie-them	

There on the beach this side of Tufi there they made rafts.

However, the simple form may also be used for predicates which are by definition habitual:

(175) tauruka eika kivariŋ oo deddeyan teifa
tauri-ka ei-ka kivarin oo deddeyan te-ifa
other-TP *they*-TP *silently or slowly* *they-speak*
But some they swallow (final vowel) or speak slowly.

The progressive aspect form expresses habitual aspect —

(176) aiti atitaukiramara seseka tirawuuwusi.
aiti ati-tauki-ramara seseka ti-ra-wuu-wu-si
we.i our.i-stay-behave all *they*-PREF-PG-*forget-it*
They have forgotten our way of life.

— or present continuous circumstance:

(177) Pitaka imaamatu
pita-ka i-maa-matu
Peter-TP *he*-PG-*sleep*
Peter is asleep.

Second person forms of the zero-enclitic simple aspect have imperative force:

(178) kumatu
ku-matu
you-sleep
Sleep!

Word finally the future enclitic /-anan/ becomes -ana in the communalect described in this paper. However, Capell (1976) and Lynch (1977) both record the predicted form -anaŋ in the communalects they studied.

The future enclitic expresses predictions:

(179) Pitaka Jonina itaruwussana
pita-ka joni-na i-taru-wur-si-anan
Peter-TP *John*-FC *he*-PREF-*hit-him*-FUT
Peter will hit John.

It also occurs in conditions:

(180) fonaisen teifananŋka kumatana
fona-i-em te-ifa-anan-ka ku-mati-anan
voice-their-INS *they-speak*-FUT-TP *you-die*-FUT
If they spoke (to you), you would die.

and as an irrealis:

(181) avana teefana taneana
avan-na te-ifi-anan ta-ne-anan
what-FC *they-tell*-FUT *we.i-do*-FUT
Whatever they say, we should do it.

The use of the future enclitic with a non-verb predicate is illustrated in:

(182) Bendooka vareana
bendoo-ka var-e-anan
Bendo-TP *house*-LOC-FUT
Bendo will be in the house.

The use of the future enclitic with a progressive aspect form is less common, but does occur:

(183) imaamaturana
i-maa-matur-anan
he-PG-*sleep*-FUT
He will be sleeping.

(184) iraarananeŋka aarana
i-ar-ar-anan-nen-ka a-ar-anan
he-PG-*go*-FUT-*that*-TP *I-go*-FUT
If he goes, I shall go.

The past enclitic /-me/ is used where the speaker intends to distinguish the past from the present, as the usual narrative past form is the zero-enclitic simple form:

(185) neŋso neŋke tivaame
nen-so nen-e ti-vaa-me
that-REF *that*-LOC *they-land*-PAST
Because of that they landed there.

/-me/ also occurs in the subordinate clause of a counterfactual conditional sentence:

(186) ikamme aanakafeŋ
i-kan-me a-kan-akafem
he-eat-PAST *I-eat*-CFAC
If he had eaten, I would have eaten.

With the progressive aspect form, /-me/ has the sense of *used to*:

(187) eika eiro maisiŋ faayana teifaafime
ei-ka ei-ro maisin faaya-na te-ifa-ifi-me
they-TP *they-only Maisin true*-FC *they*-PG-*speak*-PAST
They alone spoke the true Maisin.

or ensures that it is interpreted as past:

(188) itoki meena ikaŋkamme
i-tauki mee-na i-kan-kan-me
he-stay banana-FC *he*-PG-*eat*-PAST
He was sitting and eating a banana.

The potential enclitic /-aka/ expresses purpose or possibility:

(189) auyoka maketie ee ruaŋ ikumaaka
au-yau-ka maketi-e e-ar ruam i-kuma-aka
my-mother-TP *market*-LOC *he-go food he-sell*-POT
My mother went to the market to sell food.

(190) aaraka eefi
a-ar-aka e-ifi
I-go-POT *he-tell*
He told me to go.

(191) imaamaturaka
i-maa-matur-aka
he-PG-*sleep*-POT
He might sleep.

The counterfactual form /-akafem/ looks as if it is bimorphemic, but /-fem/ has not been elicited as a separate morpheme[14]. /-akafem/ is illustrated in (171) and (186) above. In the two examples below, one with the progressive aspect, the other with a non-verbal predicate, the counterfactual morpheme has desiderative force:

(192) imaamaturakafeŋ
i-maa-matur-akafem
he-PG-*sleep*-CFAC
I wish he were sleeping.

(193) bendooka vareakafeŋ
bendoo-ka var-e-akafem
Bendo-TP *house*-LOC-CFAC
I wish Bendo were in the house.

Occurrences of the counterfactual past morpheme /ateene/ are few and far between, but this too has desiderative force[15]:

(194) matareka bendooka katuate tamatateene
matare-ka bendoo-ka katuate tamati-ateene
firstly-TP *Bendo*-TP *teach* *man*-CFAC.PAST
If only Bendo had been a teacher formerly.

2.4.1.2 'Medial' tense/aspect-marking enclitics

There are three 'medial' tense/aspect-marking enclitics:

(195) /-n/ simultaneous (glossed *-ing*)
/-na/ durative (glossed *as*)
/-fe/ future (glossed -F)

These enclitics will be briefly illustrated here; their syntax is treated in section 3.3.2.

The simultaneous enclitic /-n/ is always attached to a verb with no other tense/aspect marking; this verb is very often immediately followed by another verb, and the two are often so closely bound together in meaning as almost to form a single semantic unit. The subject of the following verb is always identical with the subject of the verb with /-n/:

(196) awasiŋ ara moosbie
a-wasi-n a-ra moosbi-e
I-cross-ing *I-come* *Moresby*-LOC
I went across to Moresby.

(197) tuufi isuuka tekivin tiraa
tuufi isu-r-ka te-kivi-n ti-ar-ar
Tufi *nose-his*-TP *they-go.round-ing* *they*-PG-*go*
They went round the cape at Tufi.

The durative enclitic /-na/ may be attached to either a simple or a progressive aspect form of the verb. It indicates that the verb is durative, usually in relation to the punctiliarity of the following verb, which may be past, present or future:

(198) naate siraaneŋka boruŋ inanna aukuŋ ara
naate sirar-nen-ka borun i-nan-na a-uku-n a-ra
*and.then light-that-*TP *rain he.do.*PG-*as I-descend-ing I-come*
And then at dawn while it was raining I came down.

(199) Bendooka ikaŋkanna imati
bendoo-ka i-kan-kan-na i-mati
*Bendo-*TP *he-*PG-*eat-as he-die*
While Bendo was eating, he died.

The future medial enclitic is identical in form with the future temporal enclitic to the noun phrase and is presumably the same item. However, when it occurs attached to a verb phrase, there is no morphological indication that the verb phrase is nominalised (as does occur when other noun phrase enclitics are attached to a verb phrase), and /-fe/ is therefore treated here has an enclitic to the verb phrase. The enclitic /-fe/ indicates futurity and that there is a relationship with the following verb:

(200) imaamatufe ayeeana
i-maa-matu-fe a-yee-anan
*he-*PG-*sleep-*F *I-swim-*FUT
While he is asleep I shall swim.

2.4.2 Second-slot enclitics to the predicate phrase

2.4.2.1 The conjunction /ate/

The morpheme /ate/ functions as an enclitic to a predicate phrase, but is regarded as a conjunction here for two reasons. Firstly, it also occurs as an unbound morpheme sentence initially, with a discoursal sense resembling English *Now, ...*, introducing a change of discourse topic, as in the second sentence of this example:

(201) geeneye kaa bejjika aveate awasiŋ ara moosbie
geeney-e kaa bejji-ka a-ve-ate a-wasi-n a-ra moosbi-e
*Gurney-*LOC *canoe big-*TP *I-get-and I-cross-ing I-come Moresby-*LOC
I caught a plane at Gurney and I went across to Moresby.

ate moosbie araukuneŋka kefeeka seka tikefoti
ate moosbi-e a-ra-uku-nen-ka kefee-ka seka ti-kefoti
*and Moresby-*LOC *I-come-descend-that-*TP *place-*TP *all they-occupy*
But when I landed in Moresby, all the seats were occupied.

Secondly, although its enclitic function resembles that of the medial tense/aspect-marking enclitics, unlike the latter it follows and does not replace it (example (171) above), i.e. it conjoins a clause with a 'final' verb to the following clause. Its function in discourse is to mark sequence, like English *and (then)*. This is illustrated in the first sentence of the previous example and in:

(202) mee ikanate yuŋ ikuŋ
mee i-kan-ate yum i-kum
banana he-eat-and water he drink
He ate a banana and then he drank some water.

(203) bendooka ikanate aka arauku.
bendoo-ka i-kan-ate a-ka a-ra-uku
*Bendo-*TP *he-eat-and I-*TP *I-come-descend*
After Bendo had eaten, I arrived.

2.4.2.2 The demonstrative /nen/ as nominaliser

The demonstrative /nen/ (cf. section 2.1.6) is added to a final verb to nominalise a clause. This device is very common in Maisin discourse, and its functions are examined in section 3.3.4. It is illustrated here by:

(204) tivavaasimenem boregiineŋka seseka tivaasi
ti-va-vaasi-me-nen boregii-nen-ka seseka ti-vaasi
they-PG-*ascend*-PAST-*that good*.PL-*that*-TP *all they-ascend*
When they were coming up, the good ones all came up.

In this example, the nominalised clause tivavaasimeneŋ functions as a temporal adverb.

Usually /-nen/ as a nominaliser is followed by another enclitic to the noun phrase, in this example, a topic-marker:

(205) ei yabaa tinane tiregeti neŋka tiraa
ei yabaa ti-nane ti-regeti-nenka ti-ar-ar
they sail they-do.them they-do.properly-that-TP *they*-PG-*go*
When they had made sails and done it properly, they set out.

2.4.2.3 The negative marker

The negative marker in Maisin is discontinuous, and in the Marua communalect has the form isaa ... -ka[16]. The morpheme isaa precedes the whole predicate and is morphologically an independent word, whilst /-ka/ is an enclitic attached to the tense/aspect-marking enclitic, or, in the latter's absence, to the last item of the predicate. For Example:

(206) isaa iyeeyeka
isaa i-yee-ye-ka
not he-PG-*swim*-NEG
He isn't swimming.

(207) bendooka isaa raatika
bendoo-ka isaa raati-ka
Bendo-TP *not small*-NEG
Bendo is very big. (lit. *Bendo isn't small.*)

(208) bendooka isaa vareyananka
bendoo-ka isaa var-e-anan-ka
Bendo-TP *not house*-LOC-FUT-NEG
Bendo won't be in the house.

The negative enclitic /-ka/ occupies the same slot as the conjunction /-ate/ and the demonstrative /-nen/, and is deleted whenever either of these two items occurs, leaving isaa to carry the force of the negative:

(209) bendooka isaa ikanate arauku
bendoo-ka isaa i-kan-ate a-ra-uku
Bendo-TP *not he-eat-and I-come-descend*
Before Bendo had eaten, I arrived.
(lit. *Bendo didn't eat and then I arrived.*)

(210) isaa iraarananeŋka isaa aaranaŋka
isaa i-ar-ar-anan-nen-ka isaa a-ar-anan-ka
not he-PG-*go*-FUT-*that*-TP *not I-go*-FUT-NEG
If he doesn't go, I shan't go.

Note that the second example illustrates both the negative without /-ka/ and the negative with /-ka/. In the first clause, /-nen/ displaced the negative /-ka/ (topic marker /-ka/ is homophonous, but a different morpheme). –

2.4.3 The polar interrogative enclitic

The polar interrogative enclitic /-in/ is the final item of the predicate in a polar (i.e., yes/no) question, and follows any second-slot enclitic that occurs:

(211) Bendooa imaamaturiŋ
bendoo-a i-maa-matur-in
Bendo -TQ *he*-PG-*sleep*-Q
Is Bendo asleep?

(212) Bendoo foima iraiiŋ
bendoo foim-a i-rai-in
Bendo night-TQ *he-come*-Q
Did Bendo come in the night?

(213) Bendooa foiŋfea iraananiŋ
bendoo-aa foim-fe-a i-ra-anan-in
Bendo-his night-F-TQ *he-come*-FUT-Q
Will Bendo come tonight?

(214) Kooraso isaa tamenanaŋkaiŋ
koora-so isaa ta-me-n-anan-in
Kora -REF *not we*.i-*give-it*-FUT-NEG-Q
Won't we give it to Kora?

The same considerations apply if the predicate is not a verb:

(215) Borebaa vareiŋ
boreba-a var-e-in
Boreba house-LOC-Q
Is Boreba in the house?

2.5 Information-question morphemes

The following information-question morphemes have been found:

(216) /avan/ *what?*
/man/ *which?*
/ser/ *who?*
/isaa/ *when?*
/viisi/ *how much/many?*

The first three apparently never occur alone, but only with noun phrase enclitics. /ser/ and /isaa/ also occur with enclitics. /ser/ has a variant /sera/ to which certain enclitics are added. The following combinations of information-question morpheme and enclitic have been found:

(217) avana anaŋkeŋ avanso
avan-na avan-k-em avan-so
what-FC *what*-[k]-INS *what*-REF
what? *what with?* *why?* (217) contd.

manna	maŋke	maŋkefe
man-na	man-k-e	man-k-efe
which-FC	*which*-[k]-LOC	*which*-[k]-LOC
which?	*where?*	*where from?*
see	serana	serae
ser	sera-na	sera-e
who	*who*-FC	*who*-PRED
who?	*who(m)?*	*who is ...?*
sere	seraso	seraa
ser-en	sera-so	ser-aa
who-INS	*who*-REF	*who*-PSR
with whom?	*who for/to?*	*whose?*

The use of these forms is illustrated in section 3.2.2.1.

2.6 Conjunctions

Only two conjunctions has been found other than ate, presented in section 2.4.2.1. These are naate *and so* (presumably a compound which includes ate) and ai, functioning variously as *or* and *so*:

(218) ate neeniŋka isaa kasaŋka anaŋka moturaŋ ai keisi
ate neen-in-ka isaa kasan-ka a-nan-ka moturan ai keisi
and thing-this-TP *not know*-NEG *I-do*.PG-NEG *true or no*
And I don't know if this is true or false.

(219) ate eitaukiramara kefeero ... seseka kavare irauku
ate ei-tauki-ramara kefee-ro seseka kavare i-ra-uku
and their-stay-behave place-only all full he-come-descend
Now their dwelling-place ... had become completely full.

naate kefeeso te kikirame
naate kefee-so te-kii-kira-me
and.so place-REF *they*-PG-*look*-PAST
So they were looking for a place (to live).

(220) neŋso neŋke tivaame
nen-so nen-e ti-vaa-me
that-REF *that*-LOC *they-land*-PAST
Because of that they landed there

- ai tivaa neŋke titoki
ai ti-vaa nen-e ti-tauki
so they-land-PAST *that*-LOC *they-stay*
- *so they landed there and stayed.*

3. SYNTAX

This section deals with the structure of phrases and simple sentences, and with some features of sentences with more than one clause.

3.1 Phrases

On the basis of their internal structure, there are three major phrase-types in Maisin:

noun phrases
case-marked phrases
verb phrases

Structurally, temporal phrases are very much like noun phrases, and are therefore treated here as a subset of them. Temporal stems in turn appear to be noun stems (section 2.1.1.4).

Case-marked phrases are noun phrases to which a case-marking enclitic is attached.

3.1.1 Noun phrases

The following subsections describe the structure of common noun phrases, temporal phrases, co-ordinate noun phrases and possessive noun phrases.

3.1.1.1 Common noun phrases

The structure of the common noun phrase is:

(NADJ) N (ADJ)(-PL)$_n$ (DEM) (QNT)

For example:

(221) kaa-in seseka
tree-this all
N-DEM QNT
all these trees

(222) fii gambubiŋ
fii gambuubi-in
bird black-this
N ADJ-DEM
this black bird

(223) Tuufi tamaati rattiri boregiine
tuufi tamaati raati-rii boregii-nen
Tufi man small good.

these good old Tufi men

The last example includes a place name used adjectivally. Common nouns used adjectivally are also frequent:

(224) taruu foyaŋ kaa riiti
taruu foyan kaa riiti
dog tail tree root
dog's tail tree root

teree kaa	kasimoŋ kaa
tere-r kaa	kasimon kaa
inside-his tree	*door tree*
his spinal cord	*doorpost*
maŋgaagi ruufi	yaa mandaaki
mangaagi ruufi	ya-r mandaaki
spider nest	*heart-his shield*
spider's web	*his chest*

This construction is also used to form agent noun phrases, to which end a verb stem behaves as a noun:

(225)

buuro tamaati	katuatte tamataari
buuro tamaati	katuatte tamati-aa-rii
work man	*teach man*-PL-PL
worker	*teachers*

3.1.1.2 Temporal phrases

Structurally, temporal phrases are common noun phrases, and temporal stems in turn are noun stems (section 2.1.1.4). The structure of a temporal phrase is either:

(TEMP) TEMP

where the first temporal stem functions adjectivally, i.e., in the same way as a noun used adjectivally in the section above, or:

TEMP (ADJ)

An example of the first type is found in:

(226)

Bendooka	roro	foiŋ	irai
bendoo-ka	roro	foim	i-rai

Bendo -TP *yesterday night he-come*
Bendo came last night.

Phrases of similar structure are:

(227)

roro	foiŋ	afuŋ	foiŋ	rasi	foiŋ
/roro	foim/	/afun	foim/	/rasi	foim/
yesterday night		*today night*		*tomorrow night*	
last night		*tonight*		*tomorrow night*	

Examples of the second type are:

(228)

Bendooka	tambu	teriti	irai
bendoo-ka	tambun	teriti	i-rai

Bendo -TP *moon last he-come*
Bendo came last month.

(229)

ate	kindi	iteeka	avasu tinaate
ate	kindi	itee-ka	avasu ti-ne-ate
and	*day*	*other-*	*how they-do-and*

But one day they were doing something and ...

3.1.1.3 Co-ordinate noun phrases

Co-ordinate noun phrases are formed by the attachment of the instrumental case-marker or the accompaniment case-marker to the final noun phrase of the co-ordinate set:

(230) Bendoo Borebaeŋka katuate tamataari
bendoo boreba-em-ka katuate tamaati-aa-rii
Bendo Boreba-INS-TP *teach* *man*-PL-PL
Bendo and Boreba are teachers.

(231) aka kukuŋ kuuta vauno meetoŋ aŋkaŋ
a-ka kukun kuuta vauno mee-tom a-kan-kan
I-TP *taro yam as.well banana*-ACC *I*-PG-*eat*
I am eating taro, yam and banana.

3.1.1.4 Possessive noun phrases

Possessive noun phrases include a possessed noun and a possessor. The possessor is usually human and may be in the form of a noun phrase or a personal pronoun. Where a non-human possessor might be expected, e.g. *dog* in *dog's tail*, a common noun phrase usually occurs instead, with the possessor noun used adjectivally (as in (224) above).

Possessive noun phrases are of two kinds, body-part and general. In body-part possessive noun phrases, the possessed noun is one of those listed in section 2.1.1.2 as taking a possessive pronominal suffix. In general possessive noun phrases, it is an unsuffixed noun.

The basic form of the general possessive noun phrase is:

(possessor NP +) possessor PRON - possessed N

The possessor pronoun is proclitic (see section 2.1.7 above). Examples are:

(232) auvaa auyabi auyabi arivaa
au-var au-yabi au-yabi air-vaa
I-house *I-father* *I-father* *he-house*
my house *my father* *my father's house*

A possessor noun may have the possessor enclitic /-aa/ attached (section 2.1.3), in which case no proclitic pronoun occurs, i.e., the structure is:

possessor NP - PSR + possessed N

For example:

(233) tamataa me Borebaa taa
tamaati-aa me boreba-aa tar
man-PSR *banana* *Boreba*-PSR *blood*
the man's banana *Boreba's blood*

A body-part possessive noun phrase is similar in structure to the general possessive noun phrase, but a possessive pronoun suffix is added to the possessed noun, and the possessor noun phrase never takes the possessor enclitic. Thus:

(possessor NP +) possessor PRON - possessed N - PRON suffix.

For example:

(234)

eimataa	atijirati	yaa arisiraraa
ei-mata-r	ati-jir-ati	yaa ari-sirara-r
they-eye-their	*we.i-head-our.i*	*sun he-light-his*
their eyes	*our heads*	*the light of the sun*

One exception to this formulation is that the first person singular possessive suffix /-u/ is not affixed to a body-part noun in normal possessive noun phrases; its use is apparently reserved for exclamations, and here the personal pronoun is omitted. Thus:

(235)

aumata BUT:	matau
au-mata	mata-u
I-eye	*eye-my*
my eye	*my eye!*

Phrases like matau! *my eye!* and kavau! *my mouth!* are used as exclamations.

3.1.2 Case-marked phrases

The structure of case-marked phrases is:

NOUN PHRASE - CASE-MARKER

This was illustrated in section 2.2.1. The functions of case-marked phrases in clauses are discussed in section 3.2.

Case-marked phrases in which the future temporal enclitic /-fe/ is added to a temporal phrase also occur. This is consistent with the assumption that temporal phrases are a subset of noun phrases (section 3.1.1.2):

(236)

Bendooka	tambuŋ	itereefe	iraiana
bendoo-ka	tambun	iteree-fe	i-rai-anan
Bendo -TP	*moon*	*other*-F	*he-come*-FUT

Bendo will come the month after next.

Locations other than those expressed by the locative enclitic /-e/ (i.e., *in*, *at*, *to*) and the ablative enclitic /-efe/ (*from*) are expressed by case-marked phrases in which a possessive noun phrase has a case-marker attached. The possessed noun in such phrases is a noun of location (see section 2.1.1.2) which, like body-part nouns, takes a possessive suffix. Such nouns of location are:

(237)

/tere-/	*inside*
/sirava-/	*side*
/tafa-/	*top*
/kakko-/	*underside*
/wowo-/	*region above*

These nouns enter into possessive noun phrases (section 3.1.1.4) such as:

(238)

vaa	teree	vaa	tafaa
var	tere-r	var	tafa-r
house	*inside-its*	*house*	*top-its*
the inside of the house		*the top of the house*	

which in their turn have added to them the locative case-marker to form a case-marked phrase of location. Hence:

(239) Pitaka vaa terere
Pita-ka var tere-r-e
Peter-TP *house inside-its*-LOC
Peter is inside the house

Pitaka vaa tafare
Pita-ka var tafa-r-e
Peter-TP *house top-its*-LOC
Peter is on top of the house.

Where the case-marked phrase denotes location in relation to a person, some nouns of location take possessive suffixes:

(240) siravause eisee
sirava-u-s-e e-isee
side-my-[s]-LOC *he-stand*.PG
He is standing beside me.

Similarly:

(241)

tafause	siravaise	wowote
tafa-u-s-e	sirava-i-s-e	wowo-ti-e
top-my-[s]-LOC	*side-their*-[s]-LOC	*above-our*.i-LOC
on top of me	*beside them*	*above us*

Note that the proclitic possessive pronoun is omitted in these possessive noun phrases.

The noun /kakko-/ *underside* takes only the third person singular suffix, and locations in relation to people are formed by using a body-part noun, so that we find, for example:

(242) Bendooka kafati kakkore.
bendoo-ka kafa-ti kakko-r-e
Bendo -TP *chin-our*.i *underneath-its*-LOC
Bendo is shorter than us.

3.1.3 Verb phrases

The basic structure of the verb phrase is:

SP - (PG -) V (- OS)

where SP is a subject prefix
PG is a progressive aspect marking (usually reduplication)
V is a verb stem
OS is an object suffix

The morphology of the verb phrase was discussed in detail and illustrated in section 2.3.

3.2 Simple sentences

Two sets of relationships are interwoven in the Maisin sentence. The first is the essentially semantic set of role relationships indicated by item order, subject and object affixes in the verb phrase, case-markers and the predicate marker. The second is the discourse-related set of relationships indicated by

item-deletion and by information-structure markers. The first set, role relationships, belongs to the clause, whilst the second set, information-structure relationships, belongs to the sentence. Thus in a complex sentence each clause has its own role relationships, but information structure relationships embrace the sentence as a whole.

3.2.1 Role relationships: subjects and predicates

The basic structure carrying the role relationships of the Maisin clause is:

(conjunction) (TIME PHRASE) (SUBJECT) (PREDICATE)

with further adverbial phrases of time, location, source beneficiary, reference, instrument and so on inserted between subject and predicate, within the predicate, and after the predicate.

The conjunction slot is occupied by naate *and so*, ate *and* or ai *so*, which serve as discourse connectives and are illustrated in section 2.6.

The time-phrase slot is occupied by a noun phrase (usually with a temporal stem as its head) or a case-marked phrase. For example:

(243) roroka Bendoo itatansi
roro-ka bendoo i-tatam-si
yesterday-TP *Bendo he-sick-him*
Yesterday Bendo was sick.

A clause-initial time phrase is usually a topic (see section 3.2.2.2).

The subject is a noun phrase which need have no special marking, but may — especially if it is animate but not a proper name — have an instrument enclitic attached to it. An example of a subject noun phrase without marking is tauri in:

(244) ai tivaa neŋke titoki,
ai ti-vaa nen-e ti-tauki
so they-land-PAST *that*-LOC *they-stay*
So they landed there and stayed,

ate tauri kaa titari ...
ate tauri kaa ti-tar-ii
and other tree they-cut-them
but others cut trees (for canoes) ...

Subjects with instrument enclitics are:

(245) funafweeen tirauku
funa-fwee-em ti-ra-uku
skin-white-INS *they-come-descend*
The white men arrived.

(246) tamateseŋ sikooka tifunesi
tamaati-e-s-em sikoo-ka ti-fune-si
man-PL-[s]-INS *pig*-TP *they-cut-it*
The men cut up the pig.

(247) aaseŋ tamatika atti
au-s-em tamaati-ka a-kite-si
I-[s]-INS *man*-TP *I-see-him*
I saw the man.

The use of the instrument enclitic /-em/ to mark the subject is suggestive of ergativity: one is tempted to suggest that sikooka and tamatika are the subjects of their sentences and that as the patient object of a transitive clause is specially marked, we are dealing with an ergative system. However, two observations speak against this. Firstly, the subject prefix in the verb phrase agrees with the subject whether it has an instrument enclitic attached or not (and the object suffix with the object), regardless of transitivity. Secondly, subjects without instrument enclitics occur frequently, whilst subjects with instrument enclitics generally occur when some other item is topic and the subject is in focus, as in[17]:

(248) kuraneŋka aireŋ eefi
ku-ra-nen-ka air-em e-ifi
you-come-that-TP *he*-INS *he-tell*
He said that you had come.

The predicate of a clause may be one of several structures:

a) The verb phrase together with any noun phrase other than the subject which is required by the case-frame of the verb
b) Adjective
c) Noun phrase
d) Case-marked phrase

All of these predicates may take enclitics to the predicate phrase (section 2.4) in the sequence:

PREDICATE + (tense/aspect-marker) + (NEG) + (Q)

3.2.1.1 Verb phrase predicates

Verb phrase predicates are liberally illustrated throughout this paper. Verb phrase predicates were defined above as 'the verb phrase together with any noun phrase other than the subject which is required by the case-frame of the verb'. In most cases this noun phrase is the grammatical object, but there are a few cases where its status is unclear. These noun phrases, whether object or otherwise, are treated as part of the predicate not for any programmatic reason because of the structural parallel with other predicate structures that this treatment provides. Adverb phrases may precede or follow the object:

(249) OBJ ADVP VP
Joni manaana aŋgoreŋ iwawe
joni manaa-na angor-em i-wawe
John fish-FC *trap*-INS *he-catch*
John caught some fish in a trap.

(250) ADVP OBJ VP
Boreba wore ruanna ikakkasi
boreba wor-e ruan-na i-kar-kar-si
Boreba fire-LOC *food*-FC *he*-PG-*bake-it*
Boreba is baking some food on the fire.

There is a perhaps rather mixed bag of predicates where the verb /nei/ *do* follows (or occasionally precedes) a phrase which we loosely describe here as a 'completion', since it is not clear that it is the grammatical object:

(251) COMPL VP
aika kororo inaŋ
air-ka kororo i-nan
he-TP *cold* *he*-PG.*do*
He is cold.

(252) COMPL VP
ate neeniŋka isaa kasaŋka anaŋka moturaŋ ai keisi
ate neen-in-ka isaa kasan-ka a-nan-ka moturan ai keisi
and BASE-*this*-TP *not* *know*-NEG *I-do*.PG-NEG *true* *or no*
And, as for this, I don't know if this is true or false.

(253) COMPL VP
kaifi tinaŋ
kaifi ti-nan
wait *they*-PG.*do*
They were waiting.

(254) VP COMPL
neŋso ane manamanaate ...
nen-so a-ne manamana-ate
that-REF *I-do* *confused* *and* ...

Although the stem in the completion is not the semantic patient of the verb, it is evidently treated as a noun in the following example, where the verb stem /too/ *lie down* forms a noun phrase with /sesei/ *one*:

(255) COMPL VP
neŋke too sese anei
nen-ke too sese a-nei
that-LOC *lie.down* *one* *I-do*
I spent a night there.

There is also at least one kind of case where the completion slot may be filled by a noun phrase:

(256) COMPL VP
aaka afunanteŋ katuatte tamaati anei
au-ka afun-anten katuatte tamaati a-nei
I-TP *now-just* *teach* *man* *I-do*
I have just become a teacher.

3.2.1.2 Adjective predicates

Adjective predicates take a plural enclitic if the subject is plural.

Examples of adjective predicates are:

(257) yabuuka raduuana
yabuu-ka raduu-anan
ground-TP *wet*-FUT
The ground will be wet.

(258) vara wauniŋ
var-a waun-in
house-TQ *new*-Q
Is the house new?

(259)
arijameŋka sinaati
air-jamen-ka sinaati
he-sons-TP *three*
He has three sons. (lit. *His sons (are) three.*)

(260) vaaka waunaa
var-ka waun-aa
house-TP *new*-PL
The houses are new.

3.2.1.3 Noun phrase predicates

Noun phrase predicates are of two kinds, classifying and equative. The noun phrase predicates in examples (261) to (263) below are classifying. Like some adjective predicates, they place the item referred to by the subject noun phrase into the semantic category denoted by the predicate noun phrase, and mark the predicate noun phrase with a plural enclitic (or enclitics) if the subject is plural:

(261) Bendooa jameniŋ
bendoo-a jamen-in
Bendo -TQ *son*-Q
Is Bendo a child?

(262) Bendoo Borebaeŋka katuatte tamataari
bendoo boreba-em-ka katuatte tamaati-aa-rii
Bendo Boreba-INS-TP *teach man*-PL-PL
Bendo and Boreba are teachers.

(263) Bendooka isaa katuatte tamatanaŋka
bendoo-ka isaa katuatte tamaati-anan-ka
Bendo -TP *not teach man*-FUT-NEG
Bendo will not be a teacher.

The referent of an equative predicate is said to be identical with that of the subject noun phrase. The predicate noun phrase may take the predicate marker /-e/ (section 2.2.2):

(264) Bondooa serae?
bendoo-a sera-e
Bendo-TQ *who*-PRED
Who is Bendo?

(265) aire
air-e
he-PRED
It's him.

(266) varea serae?
var-e-a sera-e
house-LOC-TQ *who*-PRED
Who is it in the house?

(267) tamaati arore karaneŋka bondooe
tamaati araur-e ka-ra-nen-ka bendoo-e
man together-LOC *we.e-come-that*-TP *bendo*-PRED
The man I came with is Bendo.

3.2.1.4 Case-marked phrase predicates

Case-marked phrase predicates express the location, source, possessor, accompaniment, possession, and so on, of the subject. The examples below speak for themselves:

(268) Bendooka vare
bendoo-ka var-e
Bendo -TP *house*-LOC
Bendo is in the house.

(269) Bendooka isaa vareka
bendoo-ka isaa var-e-la
Bendo -TP *not house*-LOC-NEG
Bendo isn't in the house.

(270) Bendooa Maruaefe?
bendoo-a marua-efe
Bendo -TQ *Marua*-ABL
Is Bendo from Marua?

(271) ikosiŋka aakaŋ
ikoosi-in-ka au-kam
coconut-this-TP *I*-POSS
This coconut is mine.

(272) Bendooa sereŋ?
Bendoo-a ser-em
Bendo -TQ *who*-INS
Who is Bendo with?

(273) eika isaa sikootomanaŋka?
ei-ka isaa sikoo-tom-anan-ka
they-TP *not pig*-ACC-FUT-NEG
They won't own a pig.

(274) Bendooa kaatomiŋ?
bendoo-a kaa-tom-in
Bendo -TQ *canoe*-ACC-Q
Does Bendo have a canoe?

3.2.2 Information-structure relationships

Two sets of information-structure relationships are reflected morphologically in Maisin. These are the relationship between given and new information, and the topic/comment relationship. The terminology used here is that of Comrie (1981:56-59). Although Maisin has topic markers and a focus marker, and these belong morphologically to a single system (section 2.2.3), they reflect two separate sets of information-structure relationships. The focus marker marks an essential piece of new information, in contrast to information which is given. The topic marker marks 'what I am talking about' in contrast to the comment, i.e., 'what I am telling you about it'. The two sets of relationships map onto each other in such a way that in continuous monologue the topic markers /-ka/ and /-ro/ mark topics which are mentioned precisely because they are not predictable by the hearer and are in a sense 'new' rather than 'given'.

The use of information structure markers is more transparent in questions than in declarative clauses, and we therefore deal with their use in questions first.

3.2.2.1 Information structure in questions

Topic elements in questions are marked by the interrogative topic marker /-a/. Any noun phrase (including a temporal phrase) or case-marked phrase may be topic-marked. Verb phrases are never thus marked.

A topic element in a question is an element about which the question is being asked. This is clearest of all in information questions, where the wh-expression is the focus, i.e., the information required by the speaker (hence information-question morphemes, as section 2.5 shows, are never topic-marked). Examples (261), (264), (266), (270) and (272) above include the interrogative topic-marker /-a/, which is further illustrated in the following examples:

(275) arijamena viisi?
air-jamen-a viisi
his-sons-TQ *how.many*
How many sons has he?

(276) Bendooa isaa irai?
bendoo-a isaa i-rai
Bendo -TQ *when he-come*
When did Bendo come?

(277) seraso ikosa tamenana?
sera-so ikoosi-a ta-me-n-anan
who-REF *coconut*-TQ *we.i-give-it*-FUT
Who shall we give the coconut to?

Topicless sentences are common; the topic is often omitted when the speaker believes it to be predictable:

(278) avanso irai?
avan-so i-rai
what-REF *he-come*
Why has he come? (Topic: *he*)

(279) seraa ikoosi?
ser-aa ikoosi
who-PSR *coconut*
Whose coconut (is this)? (Topic: *this*)

(280) avaŋkeŋ kwaitoŋ
avan-k-em ku-kaito-n
what-[k]-INS *you-cut-it*
What did you cut it with? (Topic: *it*)

When a noun phrase in focus, and is not case-marked, then it may be marked with the focus marker /-na/:

(281) serana yetavea kwitti
sera-na yeta-v-e-a ku-kite-si
who-FC *road*-[v]-LOC=TQ *you-see-him*
Whom did you see on the road?

(282) Bendooa avanna inaŋ
bendoo-a avan-na i-nan
Bendo -TQ *what*-FC *he*-PG.*do*
What is Bendo doing?

(283) arivara manna?
air-var-a man-na
he-house-TQ *which*-FC
Which is his house?

The information-structure marking of polar (i.e., yes/no) questions is somewhat different. Here the focus element is often the predicate, which is marked with the polar question enclitic /-in/ (section 2.4.3). As a result, alternations like the following occur:

(284) Borebaa varein̪ varea boreba-e-in
boreba-a var-e-in var-e-a boreba-e-in
Boreba-TQ *house*-LOC-Q *house*-LOC-Q *Boreba*-PRED-Q
Is Boreba in the house (or somewhere else)? *The one in the house, is it Boreba (or someone else)?*

Where the predicate of a polar question is a verb phrase, /-in/ must be added to it. Sometimes it is the only focus element, in that all other elements are topic-marked:

(285) Bendooa ivara irabujejeniŋ?
bendoo-a ivar-a i-rabujeje-n-in
Bendo -TQ *net*-TQ *he-tear-it*-Q
Did Bendo tear the net (or did he do something else to it)?

3.2.2.2 Information structure in declarative sentences

In stretches of continuous monologue, often the only indicators of the identity of the topic are the subject- and object-marking affixes in the verb phrase. The topic marker /-ka/ therefore tends to mark newly introduced or reintroduced topics which the speaker estimates the hearer cannot recover or predict from the context. Such topics may be noun phrases functioning as subject, object, or time phrase, or they may be case-marked phrases. The following extract (from a narrative telling how the coastal Maisin came to be in their present villages) has an above-average frequency of occurrences of /-ka/, but illustrates its use admirably:

(286) 1 titokate
ti-tauki-ate
they-stay-and
They stayed and

2 maisiŋka neŋke ikafoŋ ivaasi
maisin-ka nen-e i-kafo-n i-vaasi
Maisin-TP *that*-LOC *he-grow.up-ing* *he-ascend*
the Maisin people grew up there.

3 afuŋka teukiŋ, iyon tauruka teukin tee,
afun-ka te-uki-n iyon tauri-ka te-uki-n te-ar
now-TP *they-land-ing* *clan other*-TP *they-land-ing* *they-go*
And now having landed some clans went

4 sinapa , sinipara, onenna titokee ,
sinapa sinipara onen-na ti-taukee
Sinapa *Sinipara* *that*-FC *they-stay*.PG
and settled down there at Sinapa and Sinipara.

5 airara, marua, nenna afuŋka neŋke kora titaukee.
airara marua nen-na afun-ka nen-e kora ti-taukee
Airara Marua that-FC *now*-TP *that*-LOC *only they-stay*.PG
Now they live only at Airara and Marua.

6 ate maisiŋ fonaka aifaifi afu ka tinane.
ate maisin fona-ka aifaifi afun-ka ti-nane
and Maisin voice-TP *diverse now*-TP *they-do*
But they have made the Maisin language diverse now.

7 tauruka tee eifonaka jarajarayan teifa.
tauri-ka te-ar ei-fona-ka jara-jara-yan te-ifa
other-TP *they-go their-voice*-TP *fast-fast*-ADV *they-speak*
Some they go, they speak the language fast.

8 tauruka eika, kivariŋ oo deddeyan teifa.
tauri-ka ei-ka kivarin oo dedde-yan te-ifa
other-TP *they*-TP *silently or slow*-ADV *they speak*
But some they swallow (final vowels) or speak slowly.

The topic of titokate (line 1) is a group of people mentioned earlier. In line 2, the topic is generalised to Maisiŋka, *the Maisin people*, which is therefore topic-marked. Line 3 switches topic to a later time (afuŋka *now*) and then to a particular clan (iyoŋ tauruka). In line 5 the topic again switches to a later time (afuŋka *now*), then in line 6 to the Maisin language (Maisin fonaka). In lines 7 and 8, the speaker describes how two different groups speak Maisin: he designates each as a fresh topic with /-ka/, tauruka *some* and tauruka eika *some they*.

The topics in (286) are noun phrases and temporal phrases (afuŋka). Of the noun phrases, Maisin fonaka is an object, the others subjects. To extend the picture, the following examples include case-marked phrases as topics marked with /-ka/:

(287) eika na eisoka teefi
ei-ka nan ei-so-ka te-ifi
they-TP *thus they*-REF-TP *they-tell*
As for them, that's what they say about them.

(288) funareka kuroana
funa-r-e-ka ku-ro-anan
skin-his-LOC-TP *you-enter*-FU
You may have intercourse.

The marker /-ro/ occurs much less often than /-ka/, and serves as a more emphatic version of the latter:

(289) ate eitaukiramara kefeero
ate ei-tauki-ramara kefee-ro
and they-stay-behave place-only
Now their dwelling-place

... seseka kavare irauku
seseka kavare i-ra-uku
... *all full he-come-descend*
... *had become completely full.*

(290) ate airoŋ tamataaka
ate airom tamaati-aa-ka
and old man-PL-TP
And the ancestors,

eika eiro maisiŋ faayana te-ifa-ifi-me
ei-ka ei-ro maisin faaya-na te-ifa-ifi-me
they-TP *they-only Maisin true*-FC *they*-PG-*speak*-PAST
they alone spoke the true Maisin.

The focus-marker /-na/ has not been found on case-marked phrases or on subjects, so that its occurrence is limited in the main to object noun phrases, as in the previous example. However, it is not an object-marker, as the following alternations indicate:

(291) SUBJ OBJ
tamateŋ ivaaka irabujejeŋ
tamaati-em ivar-ka i-rabujeje-n
man-INS *net*-TP *he-tear-it*
The net was torn by the man.

SUBJ OBJ
tamateŋ ivaana irabujejeŋ
tamaati-em ivar-na i-rabujeje-n
man-INS *net*-FC *he-tear-it*
A man tore the net.

(292) OBJ
Bendooka atti
bendoo-ka a-kite-si
Bendo -TP *I-see-him*
As for Bendo, I saw him.

OBJ
Bendoona atti
bendoo-na a-kite-si
Bendo -FC *I-see-him*
It was Bendo that I saw.

Indeed, an object may occur marked as neither topic nor focus, like taukiramara taubaŋ, *a good way of life*, below:

(293) taukiramara taubaŋ tarafaraŋ
tauki-ramara tauban ta-rafara-n
*stay-behave good we.*i-*find-him*
We have found a good way of life.

The function of /-na/ is evidently to focus attention on essential new information. Thus the following example is from a narrative which tells how the Maisin people had lived in darkness under the ground since creation, and then found a hole leading to the surface for the first time. The focus of the sentence is the sunlight:

(294) yaa ekisiran eukaane
yaa e-kisiran e-ukaa-nen
sun he-shine he-go.down-that
When the sun shone down

... arisiraraana tikitti
air-sirara-r-na ti-kit-si
his-light-his-TP *they-see-him*
... *they saw its light.*

In the following example, the speaker is exhorting the young people to follow their elders' instructions whatever they say, because ...

(295) eika kooti moturanna teifa
ei-ka kooti moturan-na te-ifa
they-TP *speech true*-FC *they-speak*
they are speaking the truth.

It seems very probable that the function — or one of the functions — of the instrument enclitic /-em/ when it is attached to a subject is to mark focus, i.e. to perform for the subject the same function as /-na/ performs for the object. However, the available data allow us to demonstrate this only negatively, that is, to show that no subject with /-em/ attached in continuous text is a likely candidate for the topic of its sentence.

3.3 Complex sentences

The syntactic patterning of Maisin complex sentence structures is similar to that of a number of neighbouring languages, although the actual morphemes employed are quite different. Because of this similarity, the terminology developed by Olson (1979) to describe nearby Barai of the Koiari family is used here.

Maisin, like Barai (and numerous other languages), forms complex sentences from three kinds of unit. The largest of these is the clause, whilst the other two are parts of the clause which Olson calls the core and the nucleus. The core is the subject and predicate, i.e. the clause without its peripheral adverbial phrases of time, place, instrument and so on. The nucleus is the verb phrase, i.e., the core without the noun phrases required by the verbal case-frame.

Where two nuclei are joined, we have what the literature usually refers to as verb serialisation. When two cores or two clauses are joined, this may occur by coordination or by what Olson calls cosubordination. Cosubordination is the major form of juncture in what Longacre (1972) calls 'clause-chaining'. Subordination occurs when a clause is embedded in the core of another clause or in a peripheral adverbial slot of another clause.

3.3.1 Verb serialisation

Verb serialisation is the combining of two verb phrases to make one complex verb phrase. Since they become a single verb phrase, they share the same tense and aspect and the same noun phrase arguments.

Three lexically defined categories of serialisation have been found. In the first category, the second verb always expresses movement in a particular direction; this direction is associated with the action of the first verb (which may also be a verb of movement):

(296) gorokae aa arai
goroka-e a-ar a-rai
Goroka-LOC *I-go I-come*
I came to Goroka.

(297) gorokae ara arauku
goroka-e a-ra a-ra-uku
Goroka-LOC *I-come I-come-descend*
I landed in Goroka.

The locative case-marked phrase in these two examples is apparently an argument of the complex verb phrase, rather than of either of the verb phrases individually. Further examples of serialisation with a verb of movement are:

(298) yooge tine tivaa
yoogi-e ti-ne ti-vaa
ladder-PL *they-do they-go.up*
They built ladders up.

(299) yaa ekisisi eukaa
yaa e-kisisi e-ukaa
sun he-shine he-go.down
The sun shone down.

(300) eika tifee teuki
ei-ka ti-fee te-uki
they-TP *they-fall they-land*
They fell down and landed.

In the second category of serialisation, the second verb has the stem /regeti/ *do properly*:

(301) tisasavari tiregeti
ti-sasavar-ii ti-regeti
they-hollow-them they-do.properly
They hollowed them (and did it) properly.

In the third category, the first verb has the stem /ve/ *get*:

(302) funafwee eifonaton tive teifa
funa-fwee eifona-tom ti-ve te-ifa
skin-white their-voice-ACC *they-get they-speak*
They borrow (words) from the whiteskins' language.

(303) kanrua iveŋ ikaŋ
kan-ruam i-ve i-kan
eat-food he-get he-eat
He feeds himself.

As these examples of serialisation show, both verbs are marked with a subject prefix. However, nothing intervenes between the two verb phrases, and tense/aspect marking operating over the whole complex verb phrase is indicated by one tense/aspect-marking enclitic on the second verb:

(304) yauyaabi yeiyaabi eifonaka tave
yau-yaabi yei-yaabi ei-fona-ka ta-ve
mother-father elder.brother-father their-voice-TP *we.i-get*

tareeregetana
ta-ree-regeti-anan
we.i-PG-*do.properly*-FUT
We should accept the advice of our parents and elders.

(305) ruama maŋke kuve kokaroteana
ruam-a man-e ku-ve ko-karote-anan
food-TQ *which*-LOC *you-get you-feed.them*-FUT
Where will you get food to feed them?

3.3.2 Cosubordination

In coordination, the two conjuncts have equal status and are fully independent of each other in the sense that each is marked separately for mood (declarative, interrogative, imperative). In subordination, one conjunct is embedded in the other. In cosubordination, we have a compromise between coordination and subordination in that embedding does not occur and the two conjuncts retain equal status, but are more closely bound to each other in that they share the same mood (Olson 1979).

Cosubordination may entail two cores or two clauses, always linked by a 'medial' tense/aspect-marking enclitic (section 2.4.1.2).

3.3.2.1 Cosubordination of clause cores

The cosubordination or coordination of clause cores entails the combining of two cores to make one complex core. Since they become a single core, the two constituent cores share the same tense and aspect and the same peripheral adverbials. They also have in common at least one core noun phrase (i.e., a noun phrase required by the case-frames of the verbs of the two constituent cores).

Only one form of core cosubordination occurs. This is the linking of two cores with the simultaneous enclitic /-n/, which is attached to the verb of the first core. This verb is always unreduplicated and has no other tense/aspect-marking enclitic. The second core always has a verb of movement, and it is difficult to draw a clear semantic line between this construction and the first category of verb serialisation described in section 3.3.1. Examples are:

(306) aukuŋ ara
a-ku-n a-ra
I-descend-ing I-come
I came down.

(307) awasi ara
a-wasi-n a-ra
I-descend-ing I-come
I came across.

(308) naŋ titaukokin tira
nan ti-tau-tauki-n ti-ra
thus they-PG-*stay-ing they-come*
And so they came and settled.

(309) tauruka teukin tiraa
tauri-ka te-uki-n ti-ar-ar
other-TP *they-land-ing they*-PG-*go*
Some landed and went (overland).

All of our examples of core cosubordination consist of verbs which share the same subject. However, either verb may have a core noun phrase of its own, like the object of the first verb in each of the following:

(310) tuufi isuuka tekivin tiraa
tuufi isu-r-ka te-kivi-n ti-ar-ar
*Tufi nose-his-*TP *they-go.round-ing they-*PG*-go*
They went round the cape at Tufi.

(311) Bendoo ikosina aaso iveŋ irai
bendoo ikoosi-na au-so i-ve-n i-rai
*Bendo coconut-*FC *I-*REF *he-get-it he-bring*
Bendo brought me a coconut.

— or the locative phrase with the second verb in the following:

(312) tivaŋ amuraise tiraana
ti-vaa-n amurai-e ti-ar-ar-na
*they-go.up-ing outside-*LOC *they-*PG*-go-as*
Going up, they went up outside and ...

(313) wauno taraveresiŋ wakke taraukuanaŋka
wauno ta-ra-veresi-n wakki-e ta-ra-uku-anan-ka
*and.so we.*i*-come-return-ing village-*LOC *we.*i*-come-descend-*FUT-TP
So again, when we return to the village ...

The example below includes a sequence of three cosubordinated clause cores, one of which has its own locative phrase:

(314) mataa teisen yooge tivaasin tira
matar te-ise-n yoogi-e ti-vaas-n ti-ra
*first they-walk-ing ladder-*LOC *they-ascend-ing they-come*
Leading the way, they came up the ladders.

3.3.2.2 Cosubordination of clauses

When two clauses are cosubordinate, they share the same mood and tense, but each has its own noun phrases and case-marked phrases and its own aspect.

Two cosubordinate clauses are joined by one of the two medial tense/aspect-marking enclitics /-na/ and /-fe/, which is attached to the verb at the end of the first clause.

The enclitic /-na/ is attached to either a simple or a progressive verb phrase, and indicates that the verb is durative in aspect, often in relation to the punctiliarity of the simple aspect verb in the following clause. Since cosubordinate clauses share tense, the first clause gets its tense from the second clause. For example[19]:

(315) ekisisi eukaana / arisiraraana tikitti
e-kisisi e-ukaa-na / air-sirara-r-na ti-kit-si
*he-shine he-go.down-as his-light-his-*FC *they-see-him*
As it (the sun) shone down they saw its light.

(316) meena ikaŋkanna / yuŋka auŋ
mee-na i-kan-kan-na / yum-ka a-kum
*banana-*FC *he-*PG*-eat-as / water-*TP *I-drink*
He was eating a banana and I was drinking water.

(317) saukika kaifetina isuŋ iraana / atti
sauki-ka kaifeti-na i-su-n i-ar-ar-na / a-kit-si
woman-TP *basket*-FC *she-shoulder-ing* *she*-PG-*go-as* / *I-see-her*
I saw the woman who was carrying the basket.
(The woman was carrying the basket and I saw her.)

Sometimes both verbs are durative in sense:

(318) tauruka baŋgen tiraana /
tauri-ka bangi-em ti-ra-raa-na /
other-TP *raft*-INS *they*-PG-*come-as*
While some came on the rafts,

tauruka meene tiraneŋka
tauri-ka meen-e ti-ra-nen-ka
other-TP *land*-LOC *they-come-that*-TP
when others came on land ...

The second line of the following rather complex example (on the dangers of having too many children) shows /-na/ in a future-tense context:

(319) aijamemmomorobika isaa yeevia
ai-jamen-mo-morobi-ka isaa yeevia
your.s-sons-PL-*daughters*-TP *not easy*
When your sons and daughters are not easily

afuŋfe wataasirara suusi matare kora tinanna /
afun-fe wataa-sirara suusi mata-r-e kora ti-nan-na /
now-F *many-many* *breast eye-his*-LOC *only* *they-do.*PG-*as* /
able to manage at the nipple later,

ruama maŋke kuve kokaroteana
ruam-a man-e ku-ve ko-karote-anan
food-TQ *which*-LOC *you-get* *you-feed.them*-FUT
where will you get food to feed them?

The enclitic /-fe/ has no aspectual meaning: this is indicated instead by the simple or progressive form of the verb to which it is attached. However, /-fe/ does indicate future: since cosubordinate clauses agree in tense, the following clause is marked by the enclitic /-anan/ *future*. The following examples illustrate the aspectual contrast:

(320) imatufe / iyeeana
ima-tu-fe / i-yee-anan
he-sleep-F / *he-swim*-FUT
He will sleep then he will swim.

(321) imaamatufe / ayeeana
i-maa-matu-fe / a-yee-anan
he-PG-*sleep*-F / *I-swim*-FUT
While he is sleeping, I shall swim.

The following example is from a text on spacing one's children:

(322) yauyaabina eefi kurua kuregetife /
yau-yaabi-na e-ifi ku-rua ku-regeti-fe /
mother-father-FC *he-tell* *you-hear* *you-do.properly*-F/
When you hear him say 'Mum and Dad' properly,

funareka kuroana.
funa-r-e-ka ku-ro-anan
skin-his-LOC-TP *you-enter*-FUT
you may have intercourse.

3.3.3 Coordination

Coordination involves either two clause cores or two clauses.

3.3.3.1 Coordination of clause cores

Coordinate clause cores, like cosubordinate cores, share the same tense, the same peripheral adverbials and one noun phrase argument in common. The syntax of core coordination consists of juxtaposition without morphological marking.

Three categories of core coordination have been found. The first entails a verb of motion or position in the first clause core, followed by a second core containing a verb whose action either immediately follows onto that of the verb of motion or is coterminous with the situation of the verb of position. Both verbs have the same subject:

(323) aa aŋ
a-ar a-kan
I-go I-eat
I went and ate.

(324) eise meena ikaŋkamme
e-ise mee-na i-kan-kan-me
he-stand banana-FC *he-eat-eat-*
He stood eating a banana.

The second of these two examples shows one tense-marking enclitic operating on the pair of coordinate cores.

The second category entails a verb of causation in the first clause core, followed by a core containing a verb whose action results from that of the verb of causation. The object of the first verb is coreferential with the subject of the second. For example:

(325) ikatiyawareŋ aa
i-katiyawa-ren a-ar
he-force-me I-go
He made me go.

The third category is the indirect interrogative, where the first clause core includes a verb of asking, the second the quoted question terminated with the polar interrogative enclitic:

(326) ekute kuraiin
e-ku-te ku-rai-in
he-PREF-*ask you-come*-Q
He asked if you had come.

3.3.3.2 Coordination of clauses

Three categories of clause coordination have been found. Two of these involve juxtaposition without morphological marking, and the third employs the conjunction /ate/ functioning as an enclitic.

In the first category, two clauses are semantically linked by purpose (Purposiveness is indicated by the potentiality tense/aspect marker /-aka/):

(327) auyoka maketie ee / ruaŋ ikumaaka
au-yau-ka maketi-e e-ar / ruam i-kuma-aka
my-mother-TP *market*-LOC *she-go* / *food she-sell*-POT
My mother went to the market to sell food.

The second category consists of the counterfactual conditional clausal relationship:

(328) eeme / aarakafeŋ
e-ar-me / a-ar-akafem
he-go-PAST / *I-go*-CFAC
If he had gone, I would have gone.

Note that conditions other than the counterfactual are expressed by subordination (section 3.3.4.2).

The third category of clause coordination uses /-ate/, glossed *and (then)*, to express narrative sequence (the status of /-ate/ is discussed in section 2.4.2.1). For example:

(329) tuufie eerate / vauno popondettae ee
tuufi-e e-ar-ate / vauno popondetta-e e-ar
Tufi-LOC *he-go-and* / *as.well Popondetta*-LOC *he-go*
He went to Tufi and then he went to Popondetta.

The next example illustrates how the various syntactic devices for forming complex sentences in Maisin can result in chains of verb phrases, cores and clauses in narrative:

(330) neŋso ane manamanaate /
nen-so a-ne manamana-ate
that-REF *I-do confused-and*
And so I was confused and

neŋke atokee wikeŋka timosaate /
nen-e a-taukee wikend-ka timosa-ate
that-LOC *I-stay*.PG *weekend*-TP *finish-and*
stayed there throughout the weekend, and

awasi - tyuzde awasiŋ ara
a-wasi tyuzde a-wasi-n a-ra
I-cross Tuesday I-cross-ing I-come
I came - on Tuesday I came over ...

This example contains a sequence of three clauses joined with /-ate/ and a core cosubordination with /-n/.

A common feature of Maisin narrative, which it has perhaps acquired from Trans-New Guinea Phylum languages, is recapitulation or 'pick up', whereby a sentence begins by repeating the previous sentence-final verb in medial form. This feature is common in languages of the Trans-New Guinea Phylum (see Longacre 1972:45-48; Ross with Paol 1978:35-36). Instead of a medial enclitic, however,

Maisin uses /-ate/ with this function, as at the beginning of the second sentence in this example:

(331) ee neŋke titauki.
ee nen-e ti-tauki
yonder that-LOC *they-stay*
... and so they stayed there.

titokate / maisiŋka neŋke ikafoŋ ivaasi
ti-tauki-ate / maisin-ka nen-e i-kafo-n i-vaasi
they-stay-and *Maisin*-TP *that*-LOC *he-grow.up-ing* *he-ascend*
They stayed and the Maisin people grew up there.

3.3.4 Subordination

Syntactically, subordination in Maisin is of one kind only, namely nominalisation. A nominalised clause occupies a noun phrase slot. However, Maisin nominalisation serves functions covered by nominal, adjectival (i.e., relative) and some adverbial (temporal, conditional) clauses in European languages.

With one exception, handled below, nominalised clauses are formed by the addition of the demonstrative enclitic /-nen/ (section 2.4.2.2) to the predicate phrase in the slot which follows the tense/aspect marker slot. The enclitic /-nen/ as a nominaliser is usually followed by another enclitic — either an information-structure marker or a case-marker.

The functions of nominalisation may be divided into three sets:
a) functions entailing nominalised clauses embedded in core noun phrase slots;
b) functions entailing nominalised clauses embedded in peripheral adverbial slots (temporal, conditional and reason clauses);
c) relativisation.

3.3.4.1 Nominalisations in the clause core

Nominalisations in the clause core are nominalisations with obvious European parallels. They include quotative clauses as objects of verbs of saying. For example:

(332) kuraneŋka / aireŋ eefi
ku-ra-nen-ka / air-em e-ifi
you-come-that-TP / *he*-INS *he-tell*
He said that you had come.

(333) kuraananeŋka / aireŋ eefi
ku-ra-anan-nen-ka / air-em e-ifi
you-come-FUT-*that*-TP / *he*-INS *he-tell*
He said that you would come.

The nominalised clause in each of these cases has the topic marker /-ka/, but it is not clear that this is anything more than an additional marker of nominalisation, as one would not normally expect a quotation to be the topic of its sentence.

There are also quotations which occur as the object of a verb of saying without being marked as nominalisations:

(334) aaraka / eefi
a-ar-aka / e-ifi
I-go-POT / *he-tell*
He told me to go.

(335) yauyaabina eefi / kurua kuregetife
yau-yaabi-na e-ifi ku-rua ku-regeti-fe
mother-father-FC *he-tell* / *you-hear you-do.properly*-F
When you properly hear him say 'Mum and Dad' ...

These are assumed to be clauses which are treated as noun phrases because the quotation precedes the quotative verb. If the clauses were coordinate, as in the indirect interrogative (example (326)), then we should expect the quotation to follow the verb.

The data includes just one case where a nominalisation serves as the subject of a verb and topic of this and succeeding sentences:

(336) ate abuuse aaro raati teefi aruaneŋka /
ate abuus-e aa-ro raati te-ifi a-rua-nen-ka /
and grandparent-PL *I-only small they-tell I-hear-that*-TP /
Now, what I heard my grandparents say when I was young

inannaŋ
i-nan-nan
he-do.PG-*thus*
went like this ...

The verb is inannaŋ, and the subject clause, *What I heard my grandparents say when I was young*, itself contains a clause as quotative object of the verb arua *I heard.*

3.3.4.2 Nominalisations in the clause periphery

Nominalisations in the clause periphery function as adverbials. This is less odd if we recognise that most peripheral adverbial phrases in Maisin are noun phrases, either with or without case marking. The phenomenon of a temporal phrase (a type of noun phrase) functioning as topic of a sentence is common. For example, roroka in:

(337) roroka atataŋsi
roro-ka a-tatam-si
yesterday-TP *I-sick-it*
Yesterday I was sick.

The noun /sirar/ *light* in the following example has a similar function:

(338) naate siraaneŋka boruŋ inanna aukuŋ ara
naate sirar-nen-ka borun i-nan-na a-uku a-ra
and.then light-that-TP *rain he-do*.PG-*as I-descend-ing I-come*
And then at dawn while it was raining I came down.

It is only a short step to replace the noun phrase by a clause, again functioning as a topic:

(339) ate moosbie araukuneŋka / keffeka seka tikefoti
ate moosbi-e a-ra-uku-nen-ka kefee-ka seka ti-kefoti
and Moresby-LOC *I-come-descend-that*-TP / *place*-TP *all they-occupy*
But when I landed in Moresby, all the seats were occupied.

(340) Bendoo itaranneŋka / aka aŋkamme
bendoo i-tara-ren-nen-ka / a-ka a-kan-kan-me
Bendo he-call-me-that-TP / *I*-TP *I*-PG-*eat*-PAST
When Bendo called me, I was eating.

The function served by the clause topics of these examples is that of a temporal clause. Maisin, like many other languages, makes only a distinction of tense between a temporal clause and a conditional clause, so that a clause topic with a future enclitic expresses a condition:

(341) iraarananeŋka / aarana
i-ar-ar-anan-nen-ka / a-ar-anan
he-PG-*go*-FUT-*that*-TP / *I-go*-FUT
If he goes, I shall go.

The enclitic /-nen/ is sometimes deleted by haplology from the sequence /-anan-nen-ka/:

(342) fonaisen teifanaŋka / ku-mati-anan
fona-i-em te-ifa-anan(-nen)-ka / ku-mati-anan
voice-their-INS *they-speak*-FUT*(-that)*-TP *you-die*-FUT
If they spoke, you would die.

We may understand reason clauses by similar argumentation. One of the functions of the referential case-marker /-so/ is to indicate reason:

(343) kamoraso taunie buuro inaŋ
kamora-so tauni-e buuro i-nan
stone-REF *town*-LOC *work he-do*
He worked in town to earn money.
(lit. *Because of 'stones' he worked in town.*)

If the case-marked noun phrase of reason is replaced by a nominalised clause, we have a reason clause:

(344) bendooka itaatansinenso / hospitooe ee
bendoo-ka i-tatam-si-nen-so / hospitoo-e e-ar
Bendo-TP *he-sick-him-that*-REF / *hospital*-LOC *he-go*
Bendo went to the hospital because he was sick.

(345) ariyaabi itarannenso /
air-yaabi i-tara-n-nenso /
his-father he-call-him-that-REF/
Because he called him,

bendooka ariyaabikame itaisukki
bendoo-ka air-yaabi-kam-e i-taisukki
Bendo-TP *he-father*-PSR-LOC *he-run*
Bendo ran to his father.

3.3.4.3 Relativisation

Maisin, like a number of OV languages, has a replacive relativisation strategy (Downing 1978:397-399). The complete clause to be relativised is nominalised by the addition of /-nen/: 'complete clause' means the clause including the head noun phrase (the noun phrase which, semantically at least, belongs to the matrix clause and is to be modified by the relative clause), which stays inside the relative clause, and does not usually occur outside it. For example:

(346) tauri bangi tirotiineŋka / tira
tauri bangi ti-rot-ii-nen-ka ti-ra
some raft they-tie-them-that-TP / *they-come*
Those who had made rafts came.

Thus tauri *some* is the head noun and, although it remains inside the nominalised (relative) clause, it is the subject of the matrix clause verb tira *they came*: evidence for this is the third person plural subject prefix /ti-/ of tira.

In the example above, tauri is the subject of the relative clause. The same relativisation strategy occurs if it is the object:

(347) sauki attineŋka / kaifetina isuŋ iraame
sauki a-kit-si-nen-ka / kaifeti-na i-su-n i-ar-ar-me
woman I-see-her-that-TP / *basket*-FC *she-shoulder-ing she*-PG-*go*-PAST
The woman that I saw was carrying a basket.

— or a location:

(348) wakki ataukeeneŋka / marua
wakki a-taukee-nen-ka / marua
village I-stay.PG-*that*-TP / *Marua*
The village where I live is Marua.

— or a case-marked phrase:

(349) tamatinenso kaa aasineŋka / bendooe
tamaati-nen-so kaa a-asi-nen-ka / bendoo-e
man-that-REF *canoe I-paddle that*-TP / *Bendo*-PREP
The man for whom I paddled the canoe is Bendo.

Occasionally the head noun does occupy its 'expected' position in the matrix clause, and its place in the relative clause is taken by a proform coreferential with it. Thus in the example below, the subject of the matrix clause, eitaukiramara kefeero, *their dwelling-place*, is also a case-marked phrase in the relative clause, where its place is taken by the coreferential proform neŋke *there:*

(350) ate eitaukiramara kefeero neŋke /
ate ei-tauki-ramara kefee-ro nen-e /
and they-stay-behave place-ETP *that*-LOC /
Now their dwelling-place,

titaukeemeneŋka titokee /
ti-taukee-me-nen-ka ti-taukee
they-stay.PG-PAST-*that*-TP / *they-stay*.PG
where they had been living - they were living there -

seseka kavare irauku
seseka kavare i-ra-uku
all full he-come-descend
had become completely full.

The reason for the removal of the head noun out of its clause is probably that it is a new topic in the discourse and requires prominence: hence the use of the emphatic topic marker /-ro/.

All the relative clauses in the examples above are marked with the topic marker /-ka/, a feature which they share with nominalised clauses in both core noun phrase and peripheral (temporal, conditional, reason) slots that serve as topics. Haiman (1978) suggested that conditional clauses are language universally

a form of topic and that they are marked as topics in Hua, in the Highlands of Papua New Guinea. Reesink (1981) has broadened this observation by pointing out that topics and subordinate clauses in general (including relative clauses and clauses of time, condition, and reason) share in common the characteristic that they are presupposed, and that it is a common feature of languages in Papua New Guinea to mark topics and subordinate clauses in the same way. Maisin clearly shares in this pattern.

Just one case occurs in the data where a relative clause is marked with the focus marker /-na/, not a topic marker. Rather than being counter-evidence to the generalisation which has just been made, however, the example indicates that the marking of the vast majority of relative clauses with the topic marker /-ka/ is not a mere marker of nominalisation or relativisation, but a productive marking of topicality or presupposition. Indeed, in its discourse context, the relative clause marked with /-na/ needs to be translated as a non-restrictive relative clause in English, the function of which is to provide information which is not presupposed:

(351) ate aiti atitaukiramaraka /
ate aiti ati-tauki-ramara-ka /
*and we.*i *our.*i-*stay-behave*-TP
But our way of life,

aika airo yabuu gaurefe ikakkoŋ ivaasinenna /
air-ka air-ro yabuu gaur-efe i-kakko-n i-vaasi-nen-na /
he-TP *he*-ETP *ground hole*-ABL *he-break-ing he-ascend-that*-FC /
which broke forth from under the ground and came up,

naŋ tiven tiraraame ...
nan ti-ve-n ti-ra-raa-me
thus they-get-ing they-PG-*come*-PAST
they thus brought (here) ...

In this example again, the head noun is outside the relative clause probably because it is itself a new topic.

NOTES

1. Details of Maisin's geographical distribution are provided by Dutton (1971:3,8 and 29) and Wurm and Hattori (1981).

2. I should like to thank Peter Bendo, who provided the data on which this paper is based during two periods of study at the Goroka campus of the University of Papua New Guinea in 1978 and 1979-80. I am also very grateful to John Lynch and John Barker for their comments on an earlier draft of this paper and to John Lynch for sharing with me some of his data from Sinapa village, to John Barker for corrections to some of my examples and for some data from Uyaku village.

3. This is supported by a small piece of comparative evidence: [woyaŋ] *mountain* is evidently an Austronesian item, as we find Miniafia [oyawa], Ubir [oyau], and other cognates in the Austronesian languages of the Milne Bay Province, suggesting a Pre-Maisin form *oya-.

4. The term *mora* is borrowed from Japanese phonology, where it is similarly used (Ladefoged 1975).

5. From this point onwards, for the sake of readability and the marking of syllable boundaries, phonetic transcriptions in square brackets will use double symbols for 'long' vowels and 'long' consonants.

6. Rules are labelled sequentially by letter, A, B, C, etc., such that in general the sequence of letters indicates rule-ordering. Rules which are not ordered in relation to each other are labelled A, A1, A2 etc., but the attribution of the label A indicates that all members of the set are ordered before those labelled B, C etc.

7. Words introduced from English do not undergo /e/-deletion:

   moosbie
   moosbi-e
   Moresby + LOC
   in (Port) Moresby

   taunie
   tauni + e
   town + LOC
   in town

   maketie
   maketi + e
   market + LOC
   at the market

8. This contrast is indicated in transcriptions in this paper only where it is relevant to the point which is being made. It is clear only in careful speech, and its functional load is very low.

9. From this point onwards, transcriptions of surface forms will be given without brackets in all cases. Transcriptions of underlying forms — where they are required — will be cited without slashes in interlinear glosses and between slashes elsewhere. Phonological rules relevant to the derivation of a surface form are given in brackets, denoted by the labels given in section 1.

10. Minor rules are labelled in the same way as major rules, but with small letters instead of capitals. The letter of the label indicates the point at which the minor rule applies in the sequence of major rules.

11. The third person singular simple form is used as the citation form of individual verbs.

12. The expected form with /-ren/ is ekuterereŋ, but haplology operates, giving ekutereŋ. Haplology occurs sporadically but quite commonly in Maisin.

13. The context and gloss were provided by my informant, but the sense is similar to Capell's.

14. Capell (1976:558) records this as /-akafe/, and a separate morpheme /-fe/ does occur (section 2.4.1.2), but Lynch (1977) has also recorded the final nasal.

15. Capell (1976:558) and Lynch (1977) both record this morpheme as [-ateni]. The significance of this difference is not clear to me.

16. In the Sinapa communalect, the form of the negative is saa ... -ka (Lynch 1977 and personal communication).

17. The use of an instrumental marker with an agent subject appears to be an areal feature of the region around Maisin, since it is found in languages of three different families of the Trans-New Guinea Phylum in the area, namely Suena of the Binandere family (Wilson 1974), Aomie of the Koiari family (Austing and Upia 1975), and Yareba of the Yareba family (Weimer and Weimer 1975).

18. Slashes (/) will be used in this and later sections to indicate clause boundaries in examples where the division is relevant to the point being made.

BIBLIOGRAPHY

AUSTING, John and Randolph UPIA

1975 Highlights of Ömie morphology. In Dutton, ed. 1975:513-598.

BELL, Alan and Joan B. HOOPER, eds

1978 *Syllables and segments*. Amsterdam: North-Holland.

BYNON, Theodora

1977 *Historical linguistics*. Cambridge: Cambridge University Press.

CAPELL, Arthur

1976 Austronesian and Papuan "mixed" languages: general remarks. In Wurm, ed. 1976:527-579.

CHOMSKY, Noam and Morris HALLE

1968 *The sound pattern of English*. New York: Harper and Row.

COLE, Roger W., ed.

1977 *Current issues in linguistic theory*. Bloomington: Indiana University Press.

COMRIE, Bernard

1981 *Language universals and linguistic typology*. Oxford: Basil Blackwell.

DONEGAN, Patricia J. and David STAMPE

1978 The syllable in phonological and prosodic structure. In Bell and Hooper, eds 1978:25-34.

DOWNING, Bruce T.

1978 Some universals of relative clause structure. In Greenberg et al, eds 1978:375-418.

DUTTON, T.E.

1971 Languages of south-east Papua: a preliminary report. *PL*, A-28:1-46.

DUTTON, T.E., ed.

1975 *Studies in languages of central and south-east Papua. PL,* C-29.

EZARD, Bryan

1978 Classificatory prefixes of the Massim Cluster. In Wurm and Carrington, eds 1978:1159-1180.

FERGUSON, Charles A.

1977 New directions in phonological theory: language acquisition and universals research. In Cole, ed. 1977:247-299.

GOODMAN, Morris

1971 The strange case of Mbugu (Tanzania). In Hymes, ed. 1971:243-254.

GREENBERG, Joseph H., Charles A. FERGUSON and Edith A. MORAVCSIK

1978 *Universals of human language,* vol.4: *Syntax.* Stanford: Stanford University Press.

HAIMAN, John

1978 Conditionals are topics. *Language* 54:564-589.

HOOPER, Joan B.

1976 *An introduction to natural generative phonology.* New York: Academic Press.

HYMES, Dell

1971 *Pidginisation and creolisation of languages.* London: Cambridge University Press.

LADEFOGED, Peter

1971 *Preliminaries to linguistic phonetics.* Chicago: University of Chicago Press.

1975 *A course in phonetics.* New York: Harcourt, Brace, Jovanovich.

LONGACRE, Robert E.

1972 *Hierarchy and universality of discourse constituents in New Guinea languages: discussion.* Washington, D.C.: Georgetown University Press.

LYNCH, John

1977 Notes on Maisin — an Austronesian language of the Northern Province of Papua New Guinea? University of Papua New Guinea. Mimeo.

OLSON, Michael L.

1979 Barai clause junctures: toward a functional theory of interclausal relations. Ph.D. dissertation, Australian National University, Canberra.

RAY, Sidney H.

1911 Comparative notes on Maisin and other languages of eastern Papua. *Journal of the Royal Anthropological Institute* 41:397-405.

REESINK, Ger P.

1981 On subordination in Papuan languages. Paper read at the Fifteenth Congress of the Linguistic Society of Papua New Guinea, Ukarumpa.

ROSS, Malcolm with Jonh Natu PAOL

1978 *A Waskia grammar sketch and vocabulary*. *PL*, B-56.

STAMPE, David

1979 *A dissertation on natural phonology*. Bloomington, Indiana: Indiana Linguistics Club.

STRONG, W.M.

1911 The Maisin language. *Journal of the Royal Anthropological Institute* 41:381-396.

TUCKER, A.N. and M.A. BRYAN

1974 The "Mbugu" anomaly. *Bulletin of the School of Oriental and African Studies* 37:188-207.

WEIMER, Harry and Natalia WEIMER

1975 A short sketch of Yareba grammar. In Dutton, ed. 1975:667-730.

WILSON, Darryl

1974 Suena grammar. *Workpapers in Papua New Guinea Languages* 8:1-170. Ukarumpa: Summer Institute of Linguistics.

WURM, S.A., ed.

1976 *New Guinea area languages and language study*, vol. 2: *Austronesian languages*. *PL*, C-39.

WURM, S.A. and Lois CARRINGTON, eds

1978 *Second International Conference on Austronesian Linguistics: proceedings*. *PL*, C-61.

WURM, S.A. and Shirô HATTORI, eds

1981 *Language atlas of the Pacific area*, Part 1. Canberra: The Australian Academy of the Humanities/Japan Academy. *PL*, C-66.

Ross, M. "Maisin: A preliminary sketch". In Ross, M., Siegel, J., Blust, R., Colburn, M. and Seiler, W. editors, *Papers in New Guinea Linguistics No. 23*. **A-69:1-82**. Pacific Linguistics, The Australian National University, 1984. DOI:*10.15144/PL-A69.1*

INTRODUCTION TO THE LABU LANGUAGE

Jeff Siegel

1. INTRODUCTION

1.1 Orientation

Labu is an Austronesian language spoken by approximately 1500 people in Morobe Province of Papua New Guinea. Most Labu speakers live in three villages on the Huon Gulf across the mouth of the Markham River, south of Lae city. The villages are Labubutu (pop. 703). Labumeti (411), and Labutali (408) (McElhanon 1983:17). There is also a new settlement near Markham Bridge called Lupu.

The Labu people's traditional name for themselves is Hapa [hapa]. The name Labu comes from the word [ǀabuʔ], the neighbouring Bukawac speakers' name for the Hapa. Each Hapa village consists of a separate clan. The Hapa names for these villages are the clan names: [dusuku] (Labubutu), [kakaǀa] (Labutali), and [ɛhaǀɔ] (Labumeti).

1.1.1 Dialects

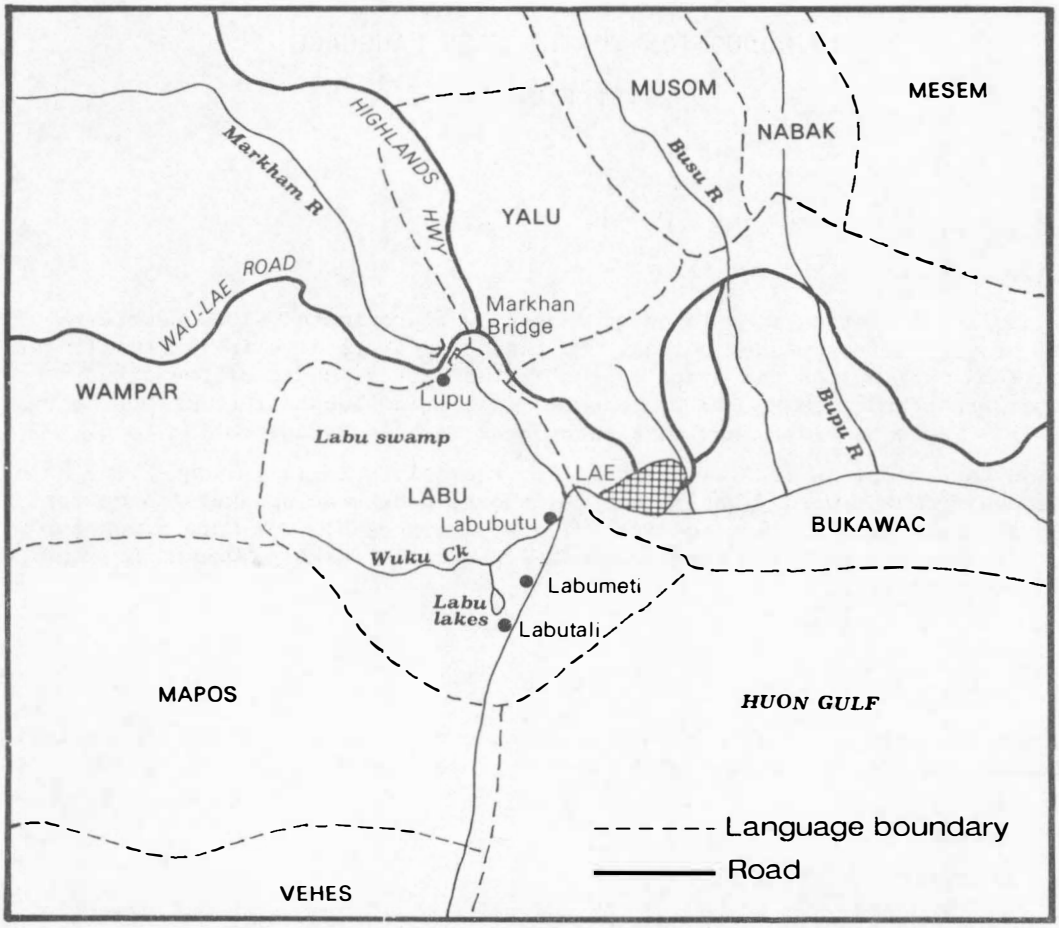
There is only one dialect of Labu, although a few lexical items in Labutali and Labumeti differ from those of Labubutu. (See page 154).

1.1.2 Neighbouring languages

The Bukawac area is to the north-east of Labu, across the mouth of the Markham. Bukawac is a member of the Huon Gulf Group of the Vitiazan Sub-family of the Siasi Family of Austronesian language (McElhanon 1983). The Lae language was also spoken in this area but it is now extinct.

To the north and west are the Yalu and Wampar languages, both members of the Adzera Family. To the south and south-west is the Mapos language, a member of the Buang Family (McElhanon 1983).

Papers in New Guinea linguistics No.23, 83-157.
Pacific Linguistics, A-69, 1984.



Location of Labu villages and neighbouring languages

1.1.3 Contact with other languages

Like most villagers of the Huon Gulf, the Labu have been influenced by the German missionaries. Most older people know Yabem, the Lutheran lingua franca of the area. Yabem is still used for church services, but it is not taught in the schools and it has been superseded by Tok Pisin (New Guinea Pidgin) as a lingua franca. Thus, among the younger generation it is largely confined to the domain of the church.

Because they live so close to Lae, virtually all Labu speakers have contact with Tok Pisin and English. Many of the men work in Lae and commute daily by canoe. The women also spend a great deal of time at the Lae market, selling fish and lime (for chewing betelnut) which they manufacture from shells.

1.2 Previous research

Labu is listed as Labo by both Schmitz (1960:446) and Salzer (1960). It is written as Labu' by Capell (1949:198; 1962:85).

The only previous linguistic work done on Labu has been the collection of word lists (Capell 1949, Fischer 1966, Hooley 1971).

On the basis of these word lists, Labu has been classified by Hooley (1976:341) as a member of the Gulf Sub-family of the Siasi family of Austronesian languages in the Morobe Province. However, Bradshaw (1978) suggests that on the basis of sound correspondences, Labu must be assigned an uncertain status with regard to subgrouping. He says, "It seems as likely to be a Siasified Azera language as an Azerafied Siasi language" (1978:54).

1.3 This study

1.3.1 Background

I began the study of Labu in 1977 with Geoff Smith while we were both members of the Department of Language and Social Science at the Papua New Guinea University of Technology at Lae. The research was funded by the university.

We began working with informants John Kosu and Conelly Aima at the university and also conducted field work at Labubutu. From 1978 until the end of 1981 I continued the project on my own. During this time I worked with Keith Kamake from Labubutu, a technical officer in the Department of Electrical and Communications Engineering at the University. It was Keith's interest and skill as an informant that made this work possible.

However, in no way is this introduction meant to be a definitive study of Labu. I had to leave Papua New Guinea before completing work on the language, but I wanted what I had accomplished to be available to those wishing to begin learning Labu or those studying related languages. Thus, I decided to write this preliminary sketch. There are many areas needing further study and clarification. Some of these gaps will be pointed out in the text. Others will probably be conspicuous.

1.3.2 Organisation

The presentation of this study is organised as follows. First, there is a short description of the phonology of Labu and the orthography used. Following this are three sections on the various types of phrases in Labu: noun phrase, verb phrase, and prepositional and temporal phrases. These sections first present the morphology associated with the phrase and then go on to the syntax of the phrase. There is also some discussion of the semantic functions of the latter types of phrases.

The next three sections deal with sentences. The first discusses the predicate and simple sentences. The second deals with sentences with verb serialisation and secondary verb phrases. Since this is an interesting area of Labu grammar, some theoretical background discussion is also included. The final section describes coordinate and complex sentences.

1.3.3 Acknowledgements

I would like to thank the Research Committee of the PNG University of Technology for supporting this research. I would also like to thank Pete Lincoln, Joel Bradshaw, Andrew Taylor, Peter Silzer, John Lynch, and Walter Seiler for their comments on earlier versions of this work. However, I alone am responsible for any shortcomings. Finally, thanks most of all to Keith Kamake for his patience in introducing me to Labu.

2. PHONOLOGY

This section briefly describes the sound system of Labu and the orthography which has been adopted for this study.

Labu has 17 consonants and 7 vowels as shown in the tables below:

Table 1: Consonants

	bilabial	alveolar	velar	postvelar
voiceless stops	p	t	k	
voiced stops	b	d	g	
prenasalised stops	^{m}b	^{n}d	^{ŋ}g	
nasals	m	n	ŋ	
fricatives		s		h
lateral flap		l		
semivowels	w	y		

Table 2: Vowels			
	front	centre	back
high (close)	i		u
high (open)	ɪ		ʊ
mid	ɛ		ɔ
low		a	

2.1 Consonants

The consonants of Labu appear in Table 1 above.

Labu is basically an open syllable language. All consonants can occur either initially or medially. The one exception is that the velar nasal /ŋ/ occurs finally in one word /apaŋ/ *always*. There are no consonant clusters.

/b/ is relatively rare. It occurs medially in only two items collected and initially in only one, not including loan words. In each case it occurs before back vowels.

Other consonants have been found occuring with all vowels except for the following: * /de/, /dɔ/, /ᵐbɔ/, /ⁿdɔ/, /ᵑgɔ/, /ŋu/, and /ye/.

When /k/ precedes /a/ medially, the voiceless velar stop [k] occurs in free variation with a voiceless velar fricative [x]:

(1) /yakadi/ [yakadi ~ yaxadi] *(I) returned*

When /d/ precedes /i/, the voiced alveolar stop [d] occurs in free variation with a voiced palatal stop [ɟ]:

/di/ [di ~ ɟi] *spear, blood*

The prenasalised labial and alveolar stops /ᵐb/ and /ⁿd/ become devoiced [ᵐp] and [ⁿt] medially preceding /ʊ/ in the following (the only two examples recorded):

(3) /aᵐbʊ/ [aᵐpʊ] *grease*
/aⁿdʊ/ [aⁿtʊ] *lump*

2.2 Vowels

The Labu vowels are shown in Table 2 above. The open high vowels /ɪ/ and /ʊ/ actually extend into the upper mid range: [ɪ ~ e] and [ʊ ~ o].

All vowels can occur with all consonants with the exceptions noted above. A vowel can also occur alone to make up a syllable. There are also several common words composed of only a single vowel:

(4)

/a/	*sun*	/ɔ/	*bridge*
/ɪ/	*fish*	/ʊ/	*crab*
/i/	*axe*	/u/	*rain*

Clusters: A maximum of two syllabic vowels can occur together. Only certain clusters have been found. First are the geminate clusters which occur for all vowels except /ɛ/:

(5)

/aaɪɛ/	*jump*	/tuu/	*broken*
/tii/	*stand up*	/dikʊʊ/	*back bundle of two carried on a pole*
/ɪɪlɪ/	*axe*	/pɔlɔɔ/	*hair (of head)*

The most frequent clusters include /a/ as a member. It appears that /a/ can be followed by all vowels except /u/:

(6)

/lae/	*line, queue*	/haɔ/	*toenail*
/maɪ/	*waves*	/haʊ/	*new*

/ai/ becomes a glide [aⁱ ~ aᴵ] forming the nucleus of one syllable:

(7) /ai/ [aⁱ] *I* /maipi/ [maⁱpi] *five*

/a/ follows all vowels except /ɛ/:

(8)

/pia/	*fall*	/pʊa/	*sweet potato*
/kɪabu/	*hibiscus*	/gua/	*canoe*
/amɔa/	*2nd born male*		

Other vowel combinations are shown in the following examples:

(9)

/upui/	*loincloth*	/ɪo/	*bonefish*
/guɪ/	*take*	/ɪtio/	*spotted trevally*

The back vowels become nonsyllabic before /a/ or /ɪ/. Thus:

(10)

/gua/	[gᵘa]	*canoe*
/guɪ/	[gᵘɪ]	*take*
/kʊa/	[kᵘa]	*bandicoot*
/ŋgua/	[ŋgᵘa]	*future modal*
/amɔa/	[amᵓa]	*second born male*

2.3 Suprasegments

2.3.1 Tonal contrasts

Tone (or pitch) is phonemically significant in Labu. The tones differ, however, only in relative pitch, and thus according to Ladefoged (1975:227), Labu could be described as a register tone language. There is only one phonemic tonal contrast and that is between relative high and low tone.

Below is a list of minimal pairs distinguished by such tonal contrast. Syllables with low tone [+ low] are marked with a grave accent [ˋ]:

(10)

/a/	*sun*	/à/	*tree, wood*
/ani/	*centipede*	/àni/	*one* (indefinite article)
/apɪ/	*side*	/àpɪ/	*sago*
/di/	*spear; wooden bowl*	/dì/	*blood; beard; sugar cane*
/hana/	*turtle*	/hanà/	*footprint*
/maya/	*shame*	/mayà/	*dead*

/ʊpa/	*crocodile*	/ʊpà/	*thought*
/ɔ/	*bridge; perspiration*	/ɔ̀/	*hook*
/ʊ/	*crab; breadfruit*	/ʊ̀/	*garden*
/u/	*rain*	/ù/	*pot*
/yalà/	*year*	/yàla/	*lamp*

A similar feature has been described by Ross (1979) for Vanimo, a language of the West Sepik Province. Two other languages of the Huon Gulf have also been described as tonal languages: Yabem and Bukawac (Capell 1949; Dempwolff 1939). In Yabem, tone is to some extent predictable "on the basis of voicing and morpheme-internal harmony requirements" (Bradshaw 1979:191-192). Bukawac has not been described in as much detail, but its use of tone appears to be similar to that of Yabem and cognates have the same tones (Capell 1949:189).

In Labu, however, tone is not predictable. In addition, cognates with Yabem do not always have the same tone: for example, Labu /ʊpà/ (high tone) and Yabem [wà] (low tone), *crocodile*.

Another feature of Labu tone is that sentence pitch is affected by lexical items which can be marked [+ low], as illustrated by these sentence contours:

(11) /ini yʊ ha ta ai/ *He gave the string bag to me.*

/ini yʊ à ta ai/ *He gave the stick to me.*

This and other aspects of tone in Labu require further study.

2.3.2 Stress

Stress does not appear to be phonemic. It most often occurs on the penultimate syllable, but there are exceptions. As with tone, more work needs to be done in this area.

2.4 Orthography

Labu has not been written previously. However, most Labu people are familiar with the orthography of Yabem. Because of this fact and because the phonology of Yabem and Labu are similar, the informants and I decided to use the Yabem orthography developed by the Lutheran mission. Thus the following symbols will be used:

a b d e ê g h i k l m n ŋ o ô p s t u w y

e = /ɛ/ ê = /ɪ/
o = /ɔ/ ô = /ʊ/

The prenasalised stops are orthographically nasal plus stop: mb, nd, and ŋg.

Because of the preferences of Labu speakers, the nonsyllabic /u/ will be written as w. Thus,

(13) gwa *canoe*
ŋgwa *future marker*

Also, again because of Labu speakers' preferences, /aⁿdʊ/ and /aᵐbʊ/ (see example 3 above) are written as follows:

(14) antô *lump*
ampô *grease*

With regard to tone, [+ low] syllables will be marked with a grave accent as above, also a convention of Yabem.

3. NOUN PHRASE (NP)

This section describes first the various constituents of the noun phrase and then the structure of the simple noun phrase.

3.1 Nouns

Nouns (N) are defined as the class of words which may stand alone as the only constituent of a noun phrase.

Nouns can be divided according to their referents into two major classes: animate and inanimate. Only animate nouns can be replaced by personal pronouns.

3.1.1 Animate nouns

Animate nouns can be further subdivided into human and non-human:

(15) animate/human: hêna *woman*
du *people*
ama *father*
aŋgi *third born male*
ainialô *son, boy*

animate/non-human: iya *dog*
ma *bird*
ênôpô *shark*
anolô *offspring*

inanimate: sapa *moon*
pisì *Markham River*
pôgwa *knife*
ôpàlà *belch*
ka *taro*

3.1.2 Temporal nouns

A temporal noun (TN) is an inanimate noun which can be the only constituent of a temporal phrase (TP) or the head noun of a NP which makes up the TP (see section 5.2):

(16) sawahê *morning*
pêhala *afternoon, evening*
pêsê *night*
ndêlene *yesterday*
takêsi *today, now*

Examples of modified temporal nouns which can be used as a TP:

(17) pêhala àni̇ *one afternoon*
yala mô *last year (year old)*
takêsi̇ lene *just now*

3.1.3 Pronouns

Pronouns (PRO) can take the place of certain nouns or NPs. Pronouns differ from other nouns in that they cannot be followed in an NP by a modifier.

There are various types of pronouns. The first are the personal pronouns which can replace nouns or NPs whose referents are animate, usually human.

Table 3: Personal pronouns

		singular (S)	dual (D)	trial (T)	plural (P)
1	exclusive (X)	ai	êmalu	êmidi	êmaha
1	inclusive (I)	--	alu	êsidi	aha
2		yê	yêmôlu	yêmôdi	yêmôha
3		ini	êsalu	êsidi	êsôha

Note that the trial forms for first person inclusive and third person are homophonous.

The following contracted forms are used in free variation with the forms in Table 3 above, usually in fast speech:

(18)	a	1ID, 1IP	môdi	2T
	ma(lu)	1XD	môha	2P
	ma(ha)	1XP	salu	3D
	môlu	2D	sidi	3T, 1IT
			sôha	3P

Note the relation between the non-singular personal pronouns and the Labu numerals:

(19) salu *two*
sidi *three*
sôha *four*

In addition to the personal pronouns, there is a general reflexive pronoun lo. There is also a temporal pronoun, tê *then*, here called pro-temporal, which can replace a temporal noun or NP.

Finally, there are three locative pronouns:

(20) tene *this place, here (near speaker)*
tênê *that place, there (near addressee)*
taê *that place, there (near neither speaker nor addressee)*

Note the morphological relationship between the locative pronouns and the demonstratives (section 3.2.1).

3.1.2 Formation of nouns

There is no productive way of forming nouns from verbs. However, there are some nouns which are made up of a verb stem plus a suffix -ya (cf. Numbami -ŋa) which may be the vestige of a morphological nominaliser. Some examples of verb-noun pairs are:

(21)	molo	*to be afraid*	moloya	*fear*
	sulu	*to scoop*	suluya	*scoop net*
	sôhô	*to build*	sôhôya	*builder*
	sêni	*to plug up*	sêniya	*a plug*
	taŋgô	*to swallow*	taŋgôya	*glutton*

Some nouns such as nama *hand*, ê *fish*, and ma *bird* appear in many compounds:

(22)	namaaho	*upper arm*	namao	*fingernail*
	namakôsô	*wrist*	namapôô	*thumb*
	namakaku	*finger*	namatô	*elbow*
(23)	êgwa	*eel*	ênôpô	*shark*
	êku	*prawn, lobster*	êti	*trevally*
	ênê	*mackerel*	êyigu	*tuna*
(24)	malêsa	*flying fox*	malô	*cockatoo*
	masundu	*bird of paradise*		

Nouns for parts of the leg contain a bound morpheme ha-. (The words for leg is akapô in Labubutu and hakapô in Labumeti and Labutali.)

(25)	hatê	*calf*	hao	*toenail*
	hakôsô	*ankle*	hapôô	*big toe*
	hakaku	*toe*	hatô	*knee*

3.2.1 Demonstratives (Qdem)

There are five free demonstratives, two of which are emphatic, two non-emphatic, and one both emphatic and non-emphatic.

(26)	emphatic	non-emphatic	
	lene	le	*this, these (near the speaker)*
	lênê	lê	*that, those (near addressee)*
	laê	laê	*that, those (near neither speaker nor addressee)*

Some examples are:

(27)	a. hanô lene	b. amêna ŋatô le
	house that	*man old this*
	that house	*this old man*

These demonstratives may also occur as the head of a NP in the predicate (see example 82e).

There are also two bound demonstratives which occur suffixed to the 3S pronoun:

(28)	ini-ne	*this one (near speaker)*
	ini-lê	*this one (near addressee)*

3.2.2 Limiters (Qlim)

The following are examples of limiters:

(29) lô *self*
lôkô *self*
tôgwatô *one, alone*

These are illustrated as follows:

(30) a. ai lô ya-gwê
I self 1S.PT-*take*
I took (it) myself.

b. ai lôkô ya-gwê
I only 1S.PT-*take*
Only I took (it).

c. ai tôgwatô ya-gwê
I one 1S.PT-*take*
I alone took (it).

3.3 Modifiers (M)

Modifiers in a NP describe the head noun, immediately following it, with the exception of pronouns already noted. A modifier can also occur as the main constituent of the predicate of a non-verbal sentence (see section 6.2.2). In addition, certain modifiers can describe a verb in a verbal sentence (see section 4.6.). There are two types of modifiers: qualitative and quantitative.

3.3.1 Qualitative modifiers (MQual)

Some examples of qualitative modifiers are as follows:

(31) anamô *big*
haô *new*
mbamba *crazy*
aselele *dry*

3.3.2 Quantitative modifiers (MQuan)

There are two types of quantitative modifiers: definite and indefinite. The definite category consists of numerals. The Labu counting system is similar to many in Papua New Guinea, based on five, for the digits of each hand or foot, and on twenty, for the number of digits of one person. The numerals one through five are:

(32) tôgwatô *one*
salu *two*
sidi *three*
sôha *four*
maipi *five*

There are three alternatives for the numerals 6 through 9:

(33) maipi anêndi tôgwatô
haipi anêndi tôgwatô } *six*
maipa tômôlô

maipi anêndi salu
haipi anêndi salu } *seven*
maipa salu

and so on. Other numerals which illustrate the system are as follows:

(34)

nômusu	*ten*
nômusu tôgwatô	*eleven*
nômusu { maipi anêndi sidi / haipi anêndi sidi / maipa sidi }	*eighteen*
asamôni	*twenty*
asamôni salu	*twenty-two*
asamô nômusu	*thirty*
asamô salu	*forty*
asamô salu nômusu	*fifty*
asamô sidi	*sixty*

Some of these numerals are most probably derived from names for body parts. For example, maipi may come from nama *hand* plus ipi *part*. ha- is the prefix used for parts of the leg. Thus, the maipi/haipi alternatives may indicate counting on either the fingers or the toes. Other elements can be glossed as follows: anêndi *fruit* or *offspring*, and by extension, *something in addition*. Also, asamôni *twenty* may be derived from samô *whole* (i.e. person) plus ànì *one*.

It should be noted that numbers over five are rarely used in Labu. Tok Pisin numbers often take their place.

The indefinite quantitative modifiers are only two in number. Here they are with examples:

(35)

akô	*some*
ànì	*one*, (indefinite article)
du akô	*some people*
pêhala ànì	*one afternoon*

3.4 Possessive markers

The possessive markers are used in the possessive NP (see section 3.5.2). They refer to the person, number, and exclusiveness of the possessor. There two types of possessive markers: genitive (POS) and nominal (POSN):

Table 4: Possessive markers

	singular		plural (D,T,P)	
	POS	POSN	POS	POSN
1X	nda	ndêêna	mê	mêêna
1I	--	--	la	lêêna
2	na	nôôna	mê	môôna
3	na	nêêna	sê	sêêna

The nominal possessive marker is clearly of verbal origin. Its different forms are those that would be derived from a verb class 1 stem -êêna with the appropriate subject/tense/modality marking prefixes (see section 4.1). Perhaps such a verb stem once existed with a meaning something like *possess (it)* or *be associated with (it)*. However, it cannot be synchronically analysed as a verb because it cannot occur as the only constituent of a verb phrase. Examples of both possessive markers are given in section 3.5.2 below.

3.5 The structure of the noun phrase

3.5.1 The simple NP

The simple NP has a noun as its head and no embedded sentence. The head noun (except for a pronoun) may be followed by one or more optional constituents.

NP → N (MQual) (MQuan) (Q)

Some examples are as follows:

(36) a. gwà kege àni
canoe small one
a small canoe

b. hanô anamô maipi lene
house big five these
these five big houses

3.5.2 The possessive NP

Labu has a relatively uncomplicated system of possesion for an Austronesian language. There are no alienable-inalienable or edible-inedible distinctions and no productive possessive suffixes. (A vestige of a typical Oceanic possessive suffix, however, may exist in the alternate referential form for ana *father* and ama *mother*: namu and amamu.)

There are two types of possessive noun phrase (PNP): the genitive and the nominal.

3.5.2.1 The genitive PNP

The genitive PNP has the following structure:

PNP → NP_1 POS NP_2

NP_1 is the possessor and NP_2 is that which is possessed. The possessive marker (POS) refers to the person, number, and exclusiveness of the head noun of NP_1:

(37) a. ai yu-dumala kô yê na ana
I 1S.PT-*look.at you* 2S.POS *mother*
I saw your mother.

b. amêna ŋatô salu le sê hanô nda mêna
man old two this 3P.POS *house stay village*
These two old men's house was in the village.

The possessor NP_1 may be deleted in a possessive phrase if it occurs earlier in the discourse and if it is clear who the possessor is:

(38) ini ya iya tê ya na ainialô
he 3S.PT.*hit dog then* 3S.PT.*hit* 3S.POS *son*
He hit the dog and then hit his son.

If the head noun of the deleted NP_1 is inanimate, then a special possessive marker êna is used:

(39) êmôha mô-kôna êna taiya mê-nda nôsôlô
*we.*XD 1X-*look.at* POS *tyre* 1P-*stay rubbish*
We looked at its tyre in the rubbish dump.

This refers to the tyre of a boat trailer mentioned in the preceding sentence of the discourse.

The possessive NP is used for certain locative expressions:

(40) a. ai nda mba ŋê-nda hanô na lôpôsô
I 1S.POS *pig* 3S.NR-*stay house* 3S.POS *area.under*
My pig is under the house.

b. nameko ŋê-nda à na ahô
N. 3S.NR-*stay tree* 3S.POS *base*
Nameko is under (at the base of) the tree.

c. amêna sê-nda hanô na wahê
man 3P.NR-*stay house* 3S.POS *top*
The men are on top of the house.

Other common expressions make use of the possessive NP:

(41) a. ai nda lêtanahi mba àni
I 1S.POS *desire pig one*
I want a pig.

b. ai nda ôpà puyu ini
I 1S.POS *thoughts* (3S.PT-)*shoot him*
I thought of him.

In fast speech, the possessive marker is sometimes deleted, especially in locative expressions and idioms:

(42) a. ini ate pô (na) anuŋgu
she (3S.PT-)*go.down water* (3S.POS) *inside*
She went down into the water.

b. ye (na) opa nu-puyu ai
you (2S.POS) *thoughts* 3S.IR-*shoot me*
Think of me.

3.5.2.2 Nominal PNP

The nominal possessive phrase is used when what is possessed is not stated. It has the following structure:

PNP → NP_1 POSN

where NP_1 is the possessor and POSN is the nominal possessive marker (see section 3.4):

(43) a. ini gwê yê nôôna
he (3S.PT-)*take you* 2S.POSN
He took yours.

tawala lene hanô lênê nêêna
door this house that 3S.POSN
This door is that house's.

As with genitive possessive phrases, the possessor NP can be deleted if its identity is clear from the discourse:

(44) ai ya-gwê ndêêna
I 1S.PT-*take* 1S.POSN
I took mine.

3.5.3 Coordination of NPs

Two NPs may be joined as follows:

NP → NP_1 { salu / kê } NP_2

where salu *two* here can be glossed as *and* and kê as *or*. Thus:

(45) a. jon salu lasatô *John and his older brother*
b. jon kê pita *John or Peter*

Another way to coordinate NPs is with a plural pronoun plus another NP (human). For example:

(46) êmalu stimiŋ *me and Stimming*
we.XD *S*.

4. VERB PHRASE (VP)

This section describes verbs and other constituents which make up the verb phrase.

4.1 Verbs (Vb)

Verbs are the class of words which consist of a verbal prefix (as described below) plus a verb stem and which can be the only constituent of a verb phrase.

4.1.1 Intransitive and transitive verbs

There are two classes of verbs: intransitive, which do not take a noun phrase as a syntactic direct object, and transitive, which may or may not take such an object. The two classes are not marked in any way.

Some examples of verb stems from the two classes are:

(47)

intransitive		transitive	
-mahanô	*die*	-gwê	*take*
-gololê	*dress up*	-pa	*go inside*
-lôwalo	*rest*	-mataya	*wait (for)*
-towi	*be hanging*	-êndi	*hang up*
-dumala	*see, look*	-kôna	*see, look at*
-molo	*be afraid*	-mêla	*frighten*

4.1.2 Tense and modality

Labu classifies actions or events in time according to two tenses: past and nonpast. Past tense (PT) refers to events which took place prior to the speech event. Nonpast events are further classified according to modality, that is according to whether or not the event has been actualised. Nonpast realis (NR) refers to events simultaneous with the speech event or to habitual events. Nonpast irrealis (IR) refers to events which have not been actualised, that is to events which may or may not take place after the speech event. Tense and modality are indicated by verbal prefixes as described below.

4.1.3 STM prefixes

The subject/tense/modality (STM) verbal prefix indicates the person, number, and exclusiveness of the subject. Distinction in number is made only between singular (S) and plural (P) which includes dual and trial.

The STM prefix indicates tense (past or nonpast) for all singular subjects and modality (NR or IR) for second and third person singular.

The STM prefixes are shown in Table 5 below, where V stands for any vowel. The realisation of this vowel is determined by which of two verb classes the verb stem is a member of and by various morphophonological rules.

Table 5: Verbal prefixes

S	IR	NR	PT
1 S	ndV-	ndV-	yV-
2 S	nô-	ŋô-	ô-
3 S	nV-	ŋV-	Ø
P (D,T,P)		IR,NR,PT	
1XP		mV-	
1IP		lV-	
2 P		mô-	
3 P		sV-	

4.1.3.1 Verb class 1 (V1)

In verb class 1 (VI) the vowel of the prefix is ô in second person (2S and 2P), but for other persons the vowel harmonises with the first vowel of the verb stem according to these rules.

$$V \rightarrow \hat{e} \;/\; \_\_\#(C) \begin{bmatrix} V \\ -back \end{bmatrix}$$

$$V \rightarrow \begin{bmatrix} V \\ +back \\ \alpha\ height \end{bmatrix} \;/\; \_\_\#(C) \begin{bmatrix} V \\ +back \\ \alpha\ height \end{bmatrix}$$

According to the above rules, the vowel in the prefix is realised as ê when the first vowel in the stem is i, ê, e, or a. Otherwise the vowel is u, ô, or o corresponding to the first vowel of the stem.

Table 6 below shows the forms of three V1 verbs: -nô *drink*, -pê *shoot (long range)* and -su *deal out one at a time*:

Table 6: Examples of V1

S	IR			NR			PT		
1 S	ndônô	ndêpê	ndusu	ndônô	ndêpê	ndusu	yônô	yêpê	yusu
2 S	nônô	nôpê	nôsu	ŋônô	ŋôsê	ŋôsu	ônô	ôpê	ôsu
3 S	nônô	nêpê	nusu	ŋônô	ŋêpê	ŋusu	nô	pê	su

P (D,T,P)	IR,NR,PT		
1XP	mônô	mêpê	musu
1IP	lônô	lèpê	lusu
2 P	mônô	môpê	môsu
3 P	sônô	sêpê	susu

4.1.3.2 Verb class 2 (V2)

In verb class two, the vowel in the prefix is again ô for second person except for second person singular nonpast (both IR and NR) where it is a. It is also a in all other instances except for third person plural past and nonpast realis where it is ê. Table 7 below shows all the forms of a V2 verb -kadi *return (to)*.

Table 7: Example of V2

	IR	NR	KD
1 S	ndakadi	ndakadi	yakadi
2 S	nakadi	ŋakadi	ôkadi
3 S	nakadi	ŋakadi	kadi
1XP	makadi	makadi	makadi
1IP	lakadi	lakadi	lakadi
2 P	môkadi	môkadi	môkadi
3 P	sakadi	sêkadi	sêkadi

A few verbs in each class have an irregular form such as -gwê *take* (V2) for which third person plural past is sôgwe instead of the expected sêgwê.

4.1.3.3 Stems beginning with vowels

For verb stems beginning with a vowel, the initial vowel is deleted after rules for determining the vowel of the prefix have been applied. Thus, the initial vowel is realised only in the third person past form where the prefix is Ø. In the case of verb stems beginning with a geminate vowel cluster, the first of the pair is deleted. For V1 verbs, when the vowel of the prefix is ô in second person, the first of the pair in the stem is deleted and the second becomes ô. Here are some examples:

(48)	stem	1S.PT	2S.PT	3S.PT	gloss
	-ate (V2)	yate	ôte	ate	*go down*
	-êêlê (V1)	yêêlê	ôôlê	êêlê	*search for*
	-aale (V2)	yaale	ôale	aale	*jump*

4.1.3.4 Homophonous verb stems distinguished by class

Some homophonous verb stems are distinguished by the verb class to which they belong. Some examples are:

(49)	-kô (V1)	*make*	-kô (V2)	*go*
	-pê (V1)	*shoot*	-pê (V2)	*defecate*

4.1.4 Irregular verbs (Virreg)

There are a few verbs which are irregular in that both the stem and the prefix do not follow the consistent pattern of other verbs. The third person singular past form is used here to identify these verbs, but this form is not necessarily the stem (as it is with regular verbs). In Tables 8 and 9 below the forms of two important irregular verbs are given: -ya *do with force, hit, eat* and -eme *come (to where the speaker is)*.

Table 8: -ya *do with force, hit, eat*

	IR	NR	PT
1 S	ndêna	ndaŋa	yêgi
2 S	wa/môa	ŋamôa	ôgi
3 S	na	ŋaŋa	ya
1XP	mêna	maŋa	mêgi
1IP	lêna	laŋa	lêgi
2 P	môa	môgi	môgi
3 P	sêna	sêya	sêgi

Note that for second person singular only there are alternate forms which distinguish two of the meanings of -ya:

(50) a. môa mba *eat the pig*

b. wa mba *hit the pig*

Table 9: -eme *come (to where speaker is)*			
	IR	NR	PT
1 S	ndame	---	yame
2 S	nawê	ŋawê	ôwe
3 S	name	ŋame	eme
1XP	mame	mame	mame
1IP	lame	lame	lame
2 P	mawê	mawê	môwe
3 P	same	seme	seme

4.1.5 The imperative

The second person irrealis forms are used for the imperative. Some examples are:

(51) a. nô-pêsa sema
2S.IR-*make fast*
Make (it) quickly.

b. mô-nô ni
2P-*drink* *coconut*
(You all) drink some coconut.

4.1.6 The counterfactual prefix (CTF)

For events contrary to fact, a counterfactual second rank prefix (CTF) is inserted between the STM prefix and the stem. The STM prefix indicates the nonpast irrealis. The CTF prefix has the form -kV- where the realisation of the vowel V follows the same rules as for the vowel in the STM prefix. The exceptions are for second and third person singular for which the irrealis prefix nV- simply becomes kV-. An example is:

(52) yê na iya mba ka-me kô ai, ai nda-ka-gwê mba dì
you 2S.POS *dog* SUB 2S.CTF-*come to me* *I* 1S.IR-CTF-*take pig close*
If your dog had come to me, I would have caught the pig.

(For additional examples see section 8.2.3.8.)

4.1.7 Phrasal verbs

A phrasal verb in Labu is the combination of a verb stem and an adjunct (usually a noun) which together have a meaning different from that of either alone. The verb stem of a phrasal verb, called a pro-verb (Lang 1975:85), has a general meaning and can also occur independently. The incorporated adjunct (INC) may also occur independently, but in the phrasal verb it most often cannot be interpreted according to its usual reference (see Bradshaw 1982:42). Furthermore, since an incorporated noun, for example, is part of the verb, it cannot be qualified or modified as a noun. Some incorporated adjuncts, however, do not occur independently.

The most common pro-verb in phrasal verbs is -ya *eat, hit, do with force.* (See Bradshaw 1982:45 for Numbami examples with the cognate -lapa < POC *(dR)apat.) Other pro-verbs are -kô *make* and -gwê *take.*

These phrasal verbs contain incorporated adjuncts which do not occur independently:

(53) -gwê malu *sleep*
-ya mì *tell stories*
-ya hono *steal*
-ya nono *set a date*
-ya palê *not know*
-ya tolo *fight*

The following phrasal verbs have incorporated nouns with other references (given in brackets) when used outside a phrasal verb:

(53) -kô molo [carving] *boast*
-ya hêna [woman] *marry* (for male subject)
-ya masi [gift] *make holy*
-ya môgi [husband] *marry*
-ya nama [hand] *wave*
-ya mà [mark] *mark out*
-ya wè [song] *do traditional singing and dancing*
-ya yo [boss] *look after, manage*

Here are some examples (for convenience, both the pro-verb and the INC will be glossed):

(55) a. ini ya masi kô a
he 3S.PT.*hit gift to day*
He made the day holy.

b. êsôha sêgi hono kô mba
they.P 3P.PT.*hit theft of pig*
They stole the pig.

See also examples (65a) and (67g) below.

Although the phrasal verbs above do not take a direct object, at least one example has been redorded of one which does: -ya alôhô *start up, establish something*:

(56) ini ya alôhô bisnis
he 3S.PT.*hit start business*
He started up a business.

4.1.8 The structure of the verb

In summary, the Labu verb is made up as follows:

Vb → STM (-CTF) -stem (INC)

4.2 Aspect markers (Asp)

Aspect, unlike tense and modality, is not indicated by verb morphology. Rather, independent aspect markers (Asp) optionally follow the verb in the VP. The most common are:

(57) (pa)sô, mênà, lê } completive: *finished* (COMP)

papa durative: *keep on ...* or continuous (DUR)

Some examples:

(58) a. ai yô-kô gwà pasô.
I 1S.PT-*make canoe* COMP
I finished making the canoe.

b. ini ya ê lê
he 3S.PT.*hit fish* COMP
He's already caught the fish.

c. yà ŋa-yaŋa hanô papa
fire 3S.NR-*burn house* DUR
The house is on fire.

4.3 Resultatives (R)

Resultatives follow the verb or its object and indicate the result of the action of the verb, usually upon the object. They are common in other related languages of the area such as Iwal, Numbami and Yabem (Bradshaw 1982:37).

The resultatives are most probably descended from verbs (e.g. hônô *killed* from POC *punu *strike, kill, extinguish*) which were part of causative serial constructions (see Bradshaw 1982). Serial verb constructions still exist in Labu (see Chapter 6), but the resultatives differ from verbs used in serial constructions in that they do not take STM prefixes.

The most common resultatives in Labu are:

(59) hônô *killed*
kêsê *cut through*
tuu *broken off*
poso *broken (of a container)*
dì *brought close*
sô *open*
sê *closed*

Some resultatives, such as tuu, poso, and sê, co-occur with a limited number of verbs:

(60) a. ai ŋgwa ndê-kela kêlêpê tuu
I FUT 1S.IR-*break.with.hands pencil broken.off*
I'll break the pencil.

b. ai ŋgwa nda-taka ni poso
I FUT 1S.IR-*cut.with.tool coconut broken*
I'll break (open) the coconut.

c. ini ya tawala sê
he 3S.IR.*hit door closed*
He closed the door.

Others have wider, and sometimes idiomatic, usage, for example kêsê:

(61) a. ini si gu kêsê
he (3S.PT-)*pull rope cut.through*
He broke the rope.

b. ai y-aale yà kêsê
I 1S.PT-*jump fire cut.through*
I jumped over the fire.

c. yê na ana hane pô kêsê
you 2S.POS *mother* (3S.PT-)*cross water cut.through*
Your mother crossed the river.

d. êmalu mêgi à kêsê
*we.*XP 1XP.PT.*hit wood cut.through*
We cut the firewood.

e. êmalu mêgi ɔ̀ kêsê
*we.*XP 1XP.PT.*hit garden cut.through*
We checked the garden (e.g. *for thieves*).

The resultative particle dì *brought close* can also be used to mean *know how to* or *usually do something*:

(62) a. ai yê-kiha ini dì
I 1S.PT-*hold her close*
I embraced her.

b. ai nda-pe pôpɔ̀ sê ahô yupa dì tê
I 1S.IR-*talk whiteman* 3P.POS *language foreign close then*
ŋgwa haya
FUT *good*
If I knew how to speak the whiteman's language (here meaning Tok Pisin), *it would be good.*

4.6 Adverbs (ADV)

Adverbs further describe the action of the verb by indicating time or frequency. Some examples of adverbs are:

(63) a. hamu *later*
sa *first*
apaŋ *always*

ini na mì apaŋ
he (3S.IR-)*hit story always*
He'll always tell stories.

4.7 Modifiers in the verb phrase

Qualitative modifiers (MQual) can also be found in the verb phrase where they describe the verb acting as adverbs of manner. There are semantic restrictions, of course, as to which modifiers can be used in the verb phrase.

Some examples are:

(64)

	in NP	in VP
sema	*fast*	*quickly*
piapia, papia	*slow*	*slowly*
haya	*good*	*well*
apêsa	*careful*	*carefully, again*
samê	*whole*	*completely*

(65) a. ana ya yo kô êmaha apêsa
mother 3S.PT.*hit boss to us*.XP *carefully*
Mother looked after us carefully.

b. êmaha mô-sôhô hanô sema
we.XP 1XP-*build house fast*
We built the house quickly.

4.8 The structure of the simple VP

In summary, the simple verb phrase is made up as follows:

VP → Vb (NP) (R) (Adv) (MQual) (Asp)

5. PREPOSITIONAL AND TEMPORAL PHRASES

5.1 Prepositional phrase (PP)

The prepositional phrase is made up of a preposition (Prep) and a noun phrase.

PP → Prep NP

There are only a few Labu prepositions. They are:

(66)

kô	*to, for, with*
dê	*from* (with inanimate NPs)
dêhi	*from* (with animate NPs)
ame	*until*
hêta	*during, at the time of*

These prepositions are most probably diachronically derived from verbs (as will be discussed in section 7.3). The difference between prepositions and verbs in Labu is a formal one: prepositions do not take verbal prefixes.

PPs with each of these prepositions will now be described.

5.1.1 PPs with kô

The most common preposition with the most functions is kô. PPs with kô are most often found in the predicate marking the following relationships: accusative, instrumental, benefactive, and referential. It can also be used in comparative and temporal constructions. Examples of each follow:

(67) ACCUSATIVE: a. du so-molo kô la
people 3P-*fear of spirits*
People are afraid of the spirits.

b. ai yu-dumala kô gwà
I 1S.PT-*look at canoe*
I looked at the canoe.

INSTRUMENTAL: c. ai yu-tutu iya kô hu
I 1S.PT-*fire.at dog with stone*
I hit the dog with the stone.

d. amêna taka ai kô namatê
man (3S.PT-)*cut me with axe*
The man cut me with an axe.

BENEFACTIVE: e. ini ŋô-sôhô hanô kô ai
he 3S.NR-*build house for me*
He's building the house for me.

f. ai yêgi hônô kô amêna
I 1S.PT.*hit killed for man*
I killed (it) for the man.

REFERENTIAL: g. ai ŋgwa ndêna mì kô ôpa
I FUT 1S.IR.*hit story about crocodile*

gwê sapu
(3S.PT-)*take S.*
I'll tell the story about the crocodile taking Sapu.

COMPARATIVE: h. ini na nênê hôni kô ai nda nênê
he 3S.POS *skin different than I* 1S.POS *skin*
He is different from me (in appearance).

TEMPORAL: i. ndêlene kô a ai yô-kôna êsalu
yesterday during sun I 1S.PT-*see them.*D
Yesterday during the day I saw them.

5.3.2 PPs with dê and dêhi

These prepositions are used for the ablative *from*, dê with NPs with inanimate referents and dêhi with animate referents:

(68) a. salu sê-nda dê apiahô sê-nda idi
3D 3P.PT-*stay from river.mouth* 3P.PT-*stay back*
They moved from the mouth of the river and back.

b. yê ôwê dê epe
you 2S.PT.*come from where*
Where did you come from?

c. ini gwê kakala dêhi ainialô
he (3S.PT-)*take chicken from boy*
He took the chicken from the boy.

d. awa gwê ai dêhi ama
maternal.uncle (3S.PT-)*take me from father*
Uncle got me from father.

e. ai yêgi kề dêhi apô
I 1S.PT.*eat food from grandmother*
My grandmother provides food for me.
(Lit. *I eat food from grandmother.*)

5.1.3 PPs with ame and hêta

Prepositional phrases with ame *until* and hêta *during, at the time of* are used in temporal phrases. The NP must have a temporal noun. Some examples are:

(69) a. amêna salu sô-kô gwà sê-nda ame pêsề
man two 3P.PT-*make canoe* 3P.PT-*stay until night*
The two men were working on the canoe until night.

b. Jon salu lasatô sê-di wè sê-nda
J. two elder.brother 3P.PT-*do singsing* 3P.PT-*stay*
ame sawahê
until morning
John and his elder brother danced (traditionally) until dawn.

c. yê ô-kô sani hêta sundatô
you 2S.PT-*do what during Christmas*
What did you do during Christmas?

5.2 Temporal phrase (TP)

The temporal phrase indicates the time or frequency of the action of the clause. All TPs contain a temporal noun. This TN alone may constitute the TP (as shown in Section 3.1.1.1). It may be followed by a modifier (example 18) or by a temporal PP with kô (5.1.1 ex. 67i), or it may be part of a PP with ame or hêta (5.1.3 ex. 69). Some other examples are:

(70) a. sundatô ai ya-kô mêna
Christmas I 1S.PT-*go village*
I went to the village for Christmas.

b. yala mô pôa pe anamô
year old sweet.potato (3S.PT-)*become big*
Last year the sweet potato crop was big.

Another TN is pepe *time, occasion* which is used with a quantitative modifier in a TP of frequency:

(71) ai ya-na pepe salu
I 1S.PT-*go time two*
I went two times.

The pro-temporal tê is often used in this type of TP:

(72) ai ya-kô walemu pepe tê sidi
I 1S.PT-*go Lae time then three*
I went to Lae three times.

6. SIMPLE SENTENCES

Simple sentences are made up of only one clause. A clause is defined as a NP (grammatical subject) plus a predicate (PRED). However, once the subject NP has been established in a discourse, it may be optionally deleted in following clauses.

This section first describes the constituents of the PRED and then goes on to describe the various types of simple sentences. Finally, there is a section on negation.

6.1 The constituents of the predicate

The predicate must consist of at least one of the following constituents: a verb phrase, a noun phrase, a modifier, or a prepositional phrase. It may also contain any of the optional elements described below in this section.

6.1.1 Modals (MOD)

The optional modals are the first element of the PRED. They indicate the likelihood of the event or state being actualised. The modals are:

(73)	ŋgwa	future	(FUT)
	wa	dubitative	(DUB)
	mba	potential	(POT)

The first two modals can be used for all types of PRED. The potential modal is used for intentional or desiderative simple verbal sentences and also for negative simple sentences. Verbs in a PRED with the FUT or DUB modal will be in the nonpast irrealis:

(74) a. ai ŋgwa ndêna mì
I FUT 1S.IR.*hit story*
I will tell a story.

b. ai wa nda-di pô
I DUB 1S.IR-*swim water*
I might go swimming.

c. ini mba nô-kôna gwà
he POT 3S.IR-*look.at canoe*
He wants to look at the canoe.

The first two modals, wa and ŋgwa can co-occur in one predicate, but neither can co-occur with mba in a simple sentence. The order is (wa) (ŋgwa):

(75) ai wa ŋgwa nda-kô walêmu
I DUB FUT 1S.IR-*go Lae*
Maybe I'll go to Lae.

6.1.2 Other constituents

The predicate can also contain a prepositional phrase and temporal phrase as described in Section 5. (The secondary verb phrase, also an optional constituent, will be described in section 7.)

6.1.3 PRED structure

The predicate, then, has the following structure:

$$\text{PRED} \rightarrow (\text{MOD}) \left\{ \begin{array}{l} \text{VP} \\ \text{NP} \\ \text{M} \\ \text{PP} \end{array} \right\} (\text{PP}) \ (\text{TP})$$

6.2 Types of simple sentences

A simple sentence has this structure:

S → (TP) NP PRED.

There are two types of simple sentences: verbal and non-verbal. Each of these can also be interrogative.

6.2.1 Verbal sentences

The most common simple sentences are the verbal sentences which have a VP in the predicate. They can be either transitive or intransitive. Examples are given in Section 4.1.

6.2.2 Non-verbal sentences

Non-verbal sentences have a noun phrase, a modifier, or a prepositional phrase as the main element of the predicate.

6.2.2.1 NP complements

Examples of NP complements are as follows:

(76) a. ini amêna haya
he man good
He's a good man.

b. ai nda lêtanahi mba àni
I 1S.POS *desire pig one*
I want a pig. (Lit. *My desire is a pig.*)

6.2.2.2 Modifier complements

Examples of M complements are:

(77) a. hanô lene kege
house this small
This house is small.

b. sapa na anawê haya
moon 3S.POS *brightness good*
The moon was bright.

M complements with natô *able, like, measure up to* have a variety of meanings. (Compare Tok Pisin inap.) Note that natô can occur only in the predicate. (See also section 8.2.3.7.)

(78) a. ai natô
I able
I'm able. (I can do it.)

b. mambele natô kô alo malata
marble like to leaf green
The marble is like a green leaf (i.e. *in colour*).

6.2.2.3 PP complements

Examples of PP complements are as follows:

(79) a. kê lene kô ini
thing this for him
This is for him.

b. ini dê ai nda kapôa
he from I 1S.POS *tribe*
He's from my tribe.

6.2.3 Interrogative sentences

6.2.3.1 Yes-no questions

There are three ways to ask yes-no questions. The first is simply with rising intonation at the end of the sentence. The second and third are with question tags put at the end of the sentence. These are e *eh* and kê ŋaki *or not*. Both use lower intonation than the sentence to which they are appended:

(80) a. yê nawe e
you 2S.IR.*come eh*
You'll come, eh?

b. ini tia sô kê ŋaki
he (3S.PT-)*know* COMP *or not*
Does he know (already) or not?

6.2.3.2 Information questions

An information question is a sentence which has final rising intonation and an interrogative marker in the place of the constituent about which information is required. The interrogative markers are:

(81)	sa(ni)	*what, which*	
	epe	*where*	
	ase	*who*	
	hihi	*how much, how many*	
	hêtape	*when (in past)*	(also hêta tê epe)
	nêtape	*when (in future)*	(also nêta tê epe)
	asa	*how*	

The PP with kô and sani as the NP has the meaning *why* or *how*.

Some examples of information questions are:

(82) a. yê ŋô-kô sani
you 2S.NR-*work what*
What are you doing?

b. à sani
tree which
Which tree (is it)?

c. yê na ama ŋê-nda epe
you 2S.POS *father* 3S.NR-*stay where*
Where is your father?

d. ase eme
who 3S.PT.*come*
Who came?

e. ase na gwà lene
who 3S.POS *canoe this*
Whose canoe is this?

f. pepe tê hihi yê ô-kô salamaua
time then how.many you 2S.PT-*go S.*
How many times have you gone to Salamaua?

g. ndêlene yê ô-gwê malu hêtape
yesterday you 2S.PT-*take sleep when*
When did you go to sleep yesterday?

h. yê ŋgwa nô-kô asa
you FUT 2S.IR-*work how*
How will you do it?

i. êsôha sô-nô pô kô sani
they 3P-*drink water for what*
Why did they get drunk? (Lit. *Why did they drink water?*)

6.3 Negation

In negative simple sentences the predicate obligatorily begins with the DUB or POT modal (most often the POT) and ends with a negative marker, -ki (NEG). This negative marker is descended from a verb stem as it takes the third person STM prefixes ŋa- NR and na- IR, depending on the tense and modality of the event in verbal sentences. However, the negative marker cannot be classified synchronically as a verb as it cannot stand alone in a VP. Thus, the negative markers are:

(83) naki irrealis (in imperative and dubitative sentences)
ŋaki nonpast realis (for present and habitual events)
ki past (for past events and non-verbal completions)

Some examples are:

(84) a. ai mba yô-nô ni ki
I POT 1S.PT-*drink coconut* NEG
I didn't drink the coconut.

b. ai mba ndu-dumala kô gwà ŋaki
I POT 1S.NR-*look at canoe* NR.NEG
I'm not looking at the canoe. or *I don't see the canoe.*

c. yê mba nu-kusu naki
you POT 2S.IR-*spit* IR.NEG
Don't spit.

d. hanô lênê mba kege ki
house that POT *small* NEG
That house isn't small.

e. pita wa ŋgwa na-sê gwà naki
P. DUB FUT 3S.IR-*go.up canoe* IR.NEG
Peter might not get on the canoe.

6.4 Fragmentary sentences

Fragmentary sentences are reduced simple sentences in that they lack either a subject or predicate. They can be greetings, short answers to questions, commands, and interjections (INTJ). Some examples are:

(85)

pêhala haya	*good afternoon*
haya	*good* (also used as reply to greeting)
ôwe	*(You've) come.* (greeting)
wa tawala sê	*Close the door.*
kê	*Yes*
(ŋa)ki	*No*
ôhô	*No! that's not right!* (INTJ)
wambô	INTJ of surprise
iana	*O mama!* INTJ for pain

7. SECONDARY VERB PHRASES

7.1 Background

Verb serialisation occurs in Labu as it does in other New Guinea Austronesian and non-Austronesian languages (Johnston 1978; Bradshaw 1980, 1982; Foley and Olson in press). It is also common in many languages of West Africa, especially of the Kwa group (Lord 1973; George 1976), and in languages of South-East and East Asia (Clark 1978; Li and Thompson 1974). Serial verb constructions in languages related to Labu "are characterised by the stringing together in one clauselike intonation unit of finite verb phrase without any markers of subordination or coordination" (Bradshaw 1982:25). Some examples from Labu are as follows:

(86) a. êmaha ma-taya yê lê mê-nda hanô
*we.*XP 1XP-*wait you* COMP 1XP.*stay house*
We waited for you at the house.

b. ai ya-ale ya-sê à
I 1S.PT-*jump* 1S.PT-*go.up tree*
I climbed the tree.

c. kôma li à pia
wind (3S.PT-)*blow tree* (3S.PT-)*fall.down*
The wind blew the tree down.

d. ai yô-kôna ô ànì suu nda idiawa
I 1S.PT-*see crab one* (3S.PT-)*crawl* (3S.PT-)*stay mangrove*
I saw a crab crawling in the mangroves.

These examples illustrate the two basic types of serial constructions. In the 'same subject' construction (a. and b.), the grammatical subject of the first

verb is also the subject of the following verb. In the 'switch subject' construction, the object of the first verb becomes the subject of the following verbs or verbs (c. and d.).

Linguists studying serialising languages have debated whether the VPs in serial constructions form a single clause or whether they represent separate clauses. Dempwolff described the serial construction in Yabem as the simplest type of conjoined sentence without boundary markers. But he went on to say that from the psychological point of view the conjoined sentence has only a single prepositional structure (Bradshaw 1980:13). Lord (1973:269) also says about the Kwa languages that "in the serial construction the verb phrases necessarily refer to sub-parts or aspects of a single overall event". These semantic factors seem to indicate that serial verb constructions are not derived from separate clauses.

In addition, there is syntactic evidence to support the single clause point of view. Bradshaw (1982:28) points out:

(a) there is no intonational or morphological clause boundary marker;
(b) choice of subject in successive VPs is highly restricted;
(c) successive VPs may not contrast with regard to negativity, tense/aspect, or polarity.

Foley and Olson (in press) also show how a single clause can be made up of "multiple predicate units" which are formed by what they call "nuclear or core junctures". They differentiate this serial verb construction from conjoined structures which they say result from "peripheral junctures", and are thus multi-clausal.

Bamgbose (1973) also proposes two types of serial constructions. The first, called the linking type, can be derived from two or more clauses. The second, the modifying type, can be derived from only a single clause. Modifying verbs in a serial construction merely modify the main verb of the sentence.

This is basically the point of view I am taking to describe Labu. Some serial constructions result from coordination between separate clauses which is morphologically unmarked. However, others result from a VP used as the grammatical means of expressing semantic or grammatical relationships that in other languages may be expressed with case markers, aspect markers, prepositions, or adverbs.

In Labu, dative, locative, comitative, and comparative relationships, as well as durative aspect, can be expressed with a VP in a serial construction. The relationship expressed by such a VP in a serial construction is secondary to the main proposition of the clause, expressed by the main, or primary VP. Thus, the term 'secondary verb phrase' refers to a VP in a serial construction which cannot be considered the main verb of the clause because of its mainly functional role.

A secondary verb phrase (hereafter VP') also differs from a primary one in that it is reduced to only two possible elements, a secondary verb (Vb') and an optional NP:

VP' → Vb' (NP)

The Vb', however, is still inflected with the STM prefix.

The rest of this section considers the various functions of secondary verb phrases in Labu and looks at a possible origin for the case marking prepositions.

7.2 Secondary verb phrases

7.2.1 The dative/benefactive and the verb -ta

The verb -ta *sit (on), stay (at), reach* is used in a VP' to express the dative/benefactive where the object of the VP' is the receiver of the object of the primary VP. On superficial analysis it would appear that ta is a preposition, but further examples show that it is the 3S PT form of -ta which has the zero STM prefix. In other tenses and when there is a first or second person object of the main verb, -ta is inflected:

(87) a. ini pe ta ai nanôa
he (3S.PT-)*say* (3S.PT-)*reach me* 2S.IR.*go*
He said to me, "Go".

b. ini yô ênê ta mba
he (3S.PT-)*give taro.skins* (3S.PT-)*reach pig*
He gave taro skins to the pig.

c. ini ŋô-yô ênê ŋê-ta mba
he 3S.NR-*give taro.skins* 3S.NR-*reach pig*
He gives taro skins to the pig.

d. ama yô ai yê-ta awa
father (#S.PT-)*give me* 1S.PT-*reach maternal.uncle*
Father gave me to uncle.

e. ai ndô-yô yêmôha mô-ta pôpô̲
I 1S.IR-*give you.P* 2P-*reach white.man*
I'll give you to the whiteman.

f. ini ŋgwa mala nê-ta ainialô
he FUT *guardian* 3S.IR-*reach boy*
He'll be guardian for the boy.

Here are some examples of -ta used as a primary verb:

(88) a. nô-ta lê
2S.IR-*sit.on that*
Sit on that.

dusuku sê-ta mêna mô
Labubutu.people 3P.PT-*stay village old*
The Labubutu people stayed in the old village.

7.2.2 The allative and the verb -kô

The verb -kô (V2) *go (to), move to* or *towards* is used to express the allative. In 3S PT it is homophonous with the Prep kô, but with other persons and tense it is inflected:

(89) a. ai nda mba eme kô ai
I 1S.POS *pig* 3S.PT.*come* (3S.PT-)*move.to me*
My pig came to me.

b. êmalu ma-gwê lê mê-nda idi ma-kô walêmu
we.XD 1XP-*take* COMP 1XP-*come back* 1XP-*move.to Lae*
We got it and came back to Lae.

c. sapu ŋame ŋa-ndê mêna haô sô
S. 3S.NR.*come* 3S.NR-*sleep village new* COMP
ŋa-kadi ŋa-kô mêna mô
3S.NR-*return* 3S.NR-*move.to village old*
Sapu comes and sleeps at the new village and returns to the old village.

7.2.3 Locative and the verb -nda

The most common secondary verb phrases are those that express location using the verb -nda *stay, come to stay*:

(90) a. ai yu-dumala yê na ana nda walêmu
I 1S.PT-*see you* 2S.POS *mother* (3S.PT-)*stay Lae*
I saw your mother in Lae.

b. êmaha ma-taya yê lê mê-nda hanô
*we.*XP 1XP-*wait you* COMP 1XP-*stay house*
We waited for you at the house.

c. ama sôsô ai mba ndêna kole ndê-nda ồ
father (3S.PT-)*force me* SUB 1S.IR.*hit work* 1S.IR-*stay garden*
Father forced me to work in the garden.

Here is an example of -nda used as a primary verb followed by another locative verb -pilipi *be near* used as a secondary verb:

(91) pita ŋê-nda ŋê-pilipi pô
P. 3S.NR-*stay* 3S.NR-*be.near water*
Peter is near the water.

7.2.4 The durative and the verb -nda

The verb -nda *stay* can also express the durative (compare Tok Pisin i stap):

(92) a. êmalu mê-êlê mê-nda
*we.*XD 1XP-*search* 1XP-*stay*
We were searching for it.

b. êsôha sô-kô gwà sê-nda ame pêsề
*they.*P 3P-*make canoe* 3P-*stay until night*
They were making the canoe until night.

7.2.5 Directionals

Several verbs are used in secondary verb phrases to indicate direction of movement:

(93) -sê *go up*
-ate *go down*
-pa *go inside*
-hê *come out*

Some examples are:

(94) a. ai ya-ale ya-sê gwà
I 1S.PT-*jump* 1S.PT-*go.up canoe*
I jumped onto the canoe.

b. ai ya-ne ya-te kakala
I 1S.PT-*sail* 1S.PT-*go.down Labutali*
I went down to Labutali.

c. êmalu ma-kadi ma-pa yuni
*we.*XD 1XP-*return* 1XP-*go.inside university*
We returned to the university.

d. ai ndô-kôna a ŋa-hê tawala nalô
I 1S.NR-*see sun* 3S.NR-*come.out door small*
I see the sun through the window.

7.2.6 The comitative with the verb -hi

The verb -hi *accompany, be with* is used for the comitative:

(95) a. ini ndê hi hêna
he (3S.PT-)*lie* (3S.PT-)*be.with woman*
He slept with a woman.

b. yê nô-hi ama na-te kêpi
you 2S.IR-*go.with father* 3S.IR-*go.down bush*
Go with your father to the bush.

c. ai yê-hi amêna ya-te kêpi
I 1S.PT-*go.with man* 1S.PT-*go.down bush*
I went with the men to the bush or
I went to the bush with the men.

7.2.7 The comparative and the verb -kêlêlê

The verb -kêlêlê *win* is used for the comparative as in this example:

(96) meri watê kêlêlê ainialô
M. *tall* (3S.PT-)*win boys*
Mary is taller than the boys.

7.2.8 Temporals

A VP' can also mark a temporal relationship. An example is given with -mô *lead, come first*:

(97) ai ndô-kô gwà na-mô
I 1S.IR-*make canoe* 3S.IR-*go.first*
I'll work on the canoe first.

7.3 Prepositions and secondary verb phrases

As mentioned in Section 5.1, Labu prepositions are most probably derived from verbs. More specifically, they are derived from secondary verbs in serial constructions. (The same holds true for the negative markers, mentioned in Section 6.3.)

The reanalysis of verbs as prepositions has been described for Chinese (Li and Thompson 1974), for South-East Asian languages (Clark 1978, 1979a, 1979b), and for West African languages (Lord 1973; Givón 1975). For the Kwa languages of West Africa, and for Labu, the main criterion for the reanalysis is the loss of the ability to take verbal affixes.

The common Labu preposition kô is homophonous with two verb stems: -kô (V1) *do, make* and -kô (V2) *go, move to*. The latter is the most probable source for the preposition kô in its accusative and dative usages, and the former for its instrumental usage. The second syllable of dêhi *from* could possibly be traced back to -hi *accompany, be with*. The two temporal interrogatives hêtape and nêtape (Section 6.2.4.2), one past and one nonpast (with nV- as the nonpast prefix), suggest a verbal origin for the temporal preposition hêta. And ame *until* appears to be closely related to the irregular verb -eme *come*.

It is noteworthy that when -kô (V2) is a secondary verb, its meaning is still basically the same as when it is a primary verb. However, the preposition kô has only a vague semantic connection to its verbal antecedent.

Clark (1979b:4) has described stages in the process of derivation of prepositions from verbs. During the second stage, both the verb and its derived preposition occur synchronically. In Labu, kô as both a preposition and a verb occur, but they have different functions. However, there is one verb in Labu for which a homophonous preposition may be just evolving. The verb -ta *sit, go to be situated (at)* is often used in a secondary verb phrase with a dative function (see example 87). However, it is sometimes not inflected where one would expect it to be. For example, both these sentences are acceptable:

(98) a. ama yô ai yê-ta awa
father (3S.PT-)*give me* 1S.PT-*reach maternal.uncle*

b. ama yô ai ta awa
father (3S.PT-)*give me to* [?] *maternal.uncle*
Father gave me to uncle.

Thus, a preposition ta may be evolving. It is also noteworthy that this usage of -ta as a secondary verb has diverged semantically from its usage as a primary verb.

8. COORDINATE AND COMPLEX SENTENCES

Coordinate and complex sentences are derived from more than one simple sentence.

8.1 Coordinate sentences

There are two types of coordinate sentences: those conjoined with intonational but not morphological markers (juxtaposed sentences) and those conjoined with coordinating conjunctions.

For both types, there is equi-NP deletion so that if the NP which is the subject of the second sentence is identical to that of the first sentence, it must be deleted.

8.2.1 Juxtaposed sentences

In juxtaposed sentence coordination, the sentence boundary is marked by a pause in the flow of speech. Example (99) below shows the most common type of juxtaposition, used for sequential sentences. The first sentence ends with the completive aspect marker, sô which is pronounced with rising intonation and followed by a pause (cf. Tok Pisin sentence juxtaposition with pinis).

(99) ôpa ànì dê katalehe watê sô
crocodile one (3S.PT-)*lie steep.bank long* COMP

aale eme
(3S.PT-)*jump* 3S.PT.*come*
A crocodile which had been lying on the long steep river bank jumped up and came.

In many cases the juxtaposed construction could alternatively be made with morphological markers. For example the following juxtaposed construction could also be made with a complex temporal phrase introduced by hêta *when* (see section 8.2.1):

(100) yê ô-na Walêmu êmaha mô-nô bia
you 2S.PT-*go Lae* *we*.XP 1XP.PT-*drink beer*
When you went to Lae, we drank beer.

8.1.2 Coordination with conjunctions

There are four coordinating conjunctions in Labu.

(101) a *and*
kê *or* (in alternative sentences)
tê *then, at the time* (in sequential coordination)
ka *as, at the time, and*

Two of these, tê and ka, can co-occur with a.

There is generally a break in the flow of speech before either a or kê and the vowel of each is lengthened.

Some examples of these conjunctions in coordinate sentences:

(102) a. Koneli ya ka a ai yêgi ami
K. 3S.PT.*eat taro and I* 1S.PT.*eat yam*
Conelly ate taro and I ate yams.

b. ai ŋgwa nda-kô Walêmu kê ŋgwa nda-na nda-gwê ê
I FUT 1S.IR-*go Lae* *or* FUT 1S.IR-*go* 1S.IR-*get fish*
I'll go to Lae or I'll go get fish.

c. ini ya ainialô mô pasô tê ya iya
he 3S.PT.*hit boy* (3S.PT-)*be.first* COMP *then hit dog*
He hit the boy first, then hit the dog.

d. êsôha sê-kêlêlê a tê sô-nô pô
they 3P.PT-*win and then* 3P.PT-*drink water*
They won and then got drunk (Lit. *drank water*).

e. u anamô a tê êmaha mê-yi ma-kadi
*rain big and then we.*XP lXP.PT-*run.away* lXP.PT-*return*
There was a heavy rain and then we ran back.

8.2 Complex sentences

Three categories of complex sentences in Labu will be discussed here: those with complex temporal phrases, those with relative clauses, and those with subordinate clauses introduced by mba.

8.2.1 Complex temporal phrases

Complex temporal phrases are introduced by hêta *during, when* or ame *until* as in the following examples:

(104) a. hêta kolenalô ani laê daa mênà êmalu
when Saturday one that (3S.PT-)*leave* COMP *we.*XD

stimiŋ ma-te mêna mô-kôna
S. lXP.PT-*go.down village* lXP.PT-*look.at*

pinasê na troli
speedboat 3S.POS *trolley*
On last Saturday Stimming and I went down to the village and looked at the speedboat's trolley (trailer).

b. ai ndê-nda ame ama name
I lS.IR-*stay until father* 3S.IR.*come*
I'll stay until father comes.

Time is also expressed with a complex TP with hêta:

(105) ai ya-di malu hêta awanô ma sôha
I lS.PT-*do sleep when hour mark four*
I slept at four o'clock.

8.2.2 Relative clauses

The general relative clause introducer (REL) is lake. It is invariable for person and number. Here are some examples of various types of relative clause constructions. In the first set the object of the main clause is the head noun of the relative clause, but it is not expressed in the relative clause. (This type is called the 'gap type' by Comrie 1981:140.)

(106) Head NP as subject of relative clause:

a. ai yô-kôna hêna lake sê-nda dusuku
I lS.PT-*see woman* REL 3P-*stay Labubutu*
I saw women who live in Labubutu.

b. amêna ya ainialê lake ya hono kô kakala
man 3S.PT.*hit boy* REL 3S.PT.*hit theft of chicken*
The man hit the boy who stole the chicken.

(107) Head NP as object of relative clause:

ini ainialô lake ai yô-kôna
he boy REL *I* 1S.PT-*see*
He's the boy whom I saw.

(108) Head NP as object of VP' in relative clause:

ai yô-kôna hanô lake amêna yô
I 1S.PT-*see house* REL *man* (3S.PT-)*give*

kakala ta
chicken (3S.PT-)*reach*
I saw the house which the man brought the chicken to.

(109) Head NP as object of instrumental PP (with Prep kô deleted):

ai yô-kôna à lake amêna ya ainialô
I 1S.PT-*see stick* REL *man* 3S.PT.*hit boy*
I saw the stick which the man beat the boy (with).

In the following example, a pronoun referring to the head NP is included in the relative clause (pronoun retention type):

(110) Head NP as NP of PP in the relative clause:

ai yô-kôna ainialô lake amêna gwê kakala dêhi ini
I 1S.PT-*see boy* REL *man* (3S.PT-)*take chicken from him*
I saw the boy whom the man got the chicken from.

In the following examples, the subject of the main clause is the head NP of an embedded relative clause. But it is debatable whether this is true embedding because the relative clause is followed by the sequential coordinating conjunction tê. (Further research is needed in this area.)

(111) a. amêna lake ya hono kô kakala tê ya ainialô
man REL 3S.PT.*hit theft of chicken then* 3S.PT.*hit boy*
The man who stole the chicken (then) hit the boy.

b. amêna lake yô kakala ta ai tê
man REL (3S.PT-)*give chicken* (3S.PT-)*reach me then*

nâ ainialô mahanô
3S.POS *son* (3S.PT-)*die*
The son of the man who gave the chicken to me died.

Relative clauses are also used for a complex type of locative phrase:

(112) ai yê-lênda ha ŋê-ti kôma
I 1S.PT-*leave string.bag* 3S.PR-*be.located.at place*

lake aha lô-lôwalo
REL *we.*IP 1IP.PT-*rest*
I left my string bag at the place where we rested.

Finally the relativiser lake plus the pro-temporal tê is another way of introducing complex temporal phrases: lake tê *at that time, when*:

(113) ini na ya kê pasô mba na-kadi lake tê
he (3S.PT-)*go* 3S.PT.*eat food* COMP POT 3S.IR-*return* REL *then*

tatawa anamô eme wa kôma sê
cloud big 3S.PT.*come* (3S.PT-)*cover place* (3S.PT- *go.up*
He had eaten and was about to return when big clouds came and covered the place.

8.2.3 Complex sentences with mba

A variety of complex sentence types include constructions with the general subordinating conjunction mba. Related languages have similar subordinators but they are morphologically verbs, e.g. Yabem -be and Numbami -ŋgo, both glossed as *say* (Bradshaw 1980:19).

8.2.3.1 Adversatives

In Labu adversative clauses are introduced by tôgwatô *one* (and here *but*) plus mba:

(114) a. ini yo haya tôgwatô mba ainialô
he boss good but SUB *boy*
He's a good boss but too young.

b. ai mba nda-na ndê-êlê ê tôgwatô mba u
I SUB 1S.IR-*go* 1S.IR-*look.for fish but* SUB *rain*

anamô ya
big 3S.PT.*hit*
I want to go look for fish, but a big rain hit.

8.2.3.2 Purposives

The use of mba for purposives is closely related to the desiderative and intentional. The complement in purposives takes the irrealis nonpast STM prefix:

(115) a. mba haya mba lêna
pig good SUB 1IP.*eat*
The pig is good for us to eat.

b. konda yô pu ta pita
K. (3S.PT- *give betelnut* (3S.PT-)*reach P.*

mba nô-yô nê-ta ainialô
SUB 3S.IR-*give* 3S.IR-*reach boy*
Konda gave betelnut to Peter to give to the boy.

c. ini kadi kô mêna mô mba na kê
he (3S.IR-)*return* (3S.PT-)*go village old* SUB 3S.IR.*eat food*
He returned to the old village to eat.

8.2.3.3 Reason clauses

Reason clauses are introduced by the preposition kô *for* plus mba:

(116) êsôha sô-nô pô kô mba êsôha sê-kêlêlê sêsê
they.P 3P.PT-*drink water for* SUB *they* 3P.PT-*win game*
They got drunk (lit. *drank water*) *because they won the game.*

8.2.3.4 Quotatives

Both direct and indirect quotations are introduced by mba. However, it is optional for direct quotations:

(117) indirect:

a. na-pe mba ini na tawala sô
2S.IR-*tell* SUB *he* 3S.IR.*hit door open*
Tell him to open the door.

b. ini pe ta ai mba nda-na
he (3S.PT-)*tell* (3S.PT-)*reach me* SUB 1S.IR-*go*
He told me to go.

(118) direct:

ini pe ta ai (mba) nanoa
he (3S.PT-)*tell* (3S.PT-)*reach me* (SUB) 2S.IR.*go*
He told me, "Go."

8.2.3.5 Causatives

The complement (in the irrealis nonpast) is introduced by mba in some causative-like constructions. For example:

(119) a. ama sôsô ai mba ndêna kolê ndê-nda ɔ̀
father (3S.PT-)*force me* SUB 1S.IR.*hit work* 1S.IR-*stay garden*
Father forced me to work in the garden.

b. ai yô-sôsô ampele mba nê-pêsa kopi
I 1S.PT-*force A.* SUB 3S.IR-*make coffee*
I made Ampre make coffee.

8.2.3.6 Negatives

Section 6.2.5 showed how mba is used in negative simple sentences. It is also used with two negative verbs: -le *not want (to do something)* and the phrasal -ya palê *not know.* Complements are not restricted in tense. Some examples are:

(120) a. ai ya-le mba ndêna ê
I 1S.PT-*not.want* SUB 1S.IR.*eat fish*
I don't want to eat fish.

b. ai yêgi palê mba ŋgwa nda-di pô
I 1S.PT.*hit not.know* SUB FUT 1S.IR-*swim water*
I don't know if I'll go swimming.

8.2.3.7 Abilitatives

Abilitatives have a subordinate clause following natô *able, measure up to*:

(121) a. ai natô mba ndô-kôna gwà
I able SUB 1S.PR-*see canoe*
I can see the canoe.

b. ai mba natô mba ndô-kôna gwà ki
I POT *able* SUB 1S.IR-*see canoe*
I can't see the canoe.

8.2.3.8 Conditionals and counterfactual sentences

Conditionals and counterfactual sentences (with unrealised if-clauses) differ from other complex sentences in that the initial clause is subordinated. In conditional sentences, the irrealis STM prefix is used and the sequential conjunction tê is optional. Verbs in counterfactual sentences also have the CTF prefix (see Section 4.1.6). Some examples are:

(122) a. yê mba nô-yô pù nê-ta ini tê
you SUB 2S.IR-*give betelnut* 3S.IR-*reach him then*

ŋgwa lêta haya
FUT *belly good*
If you give the betelnut to him, then he'll be happy.

b. mba nô-kôna pinasê neme tê aha la-kô walêmu
SUB 2S.IR-*see speedboat* 3S.IR.*come then we*.IP 1IP-*go.to Lae*
If you see the speedboat come, then we'll go to Lae.

c. ai mba ndô-nô ni ai nda nênê aiyaŋa na-hê
I SUB 1S.IR-*drink coconut I* 1S.POS *body strong* 3S.IR-*become*
If I drink coconuts, my body will become strong.

d. ai mba ndô-kô-nô ni ai nda nênê
I SUB 1S.IR-CTF-*drink coconut I* 1S.POS *body*

aiyaŋa ka-hê
strong 3S.CTF-*become*
If I had drunk coconuts, my body would have become strong.

9. TEXT

This text is from Keith Kamake of Labubutu. First the text is given with interlinear morpheme glosses. This is followed by a free English translation.

Double slashes indicate pauses in the discourse marking complex sentence boundaries between coordinate clauses. Verbs with the Ø STM prefix are 3S.PT, although in this text they are not glossed as such.

ai ŋgwa ndêna mì kô ôpa gwê sapu // hêta tê mêna dusuku
I FUT 1S.IR.*hit story about crocodile take Sapu when then village Labubutu*

sê-ta mêna mô sô sê-na o sô-kô mêna haô a
3P.PT-*sit village old* COMP 3P.PT-*go.for sweat* 3P.PT-*make village new and*

du aniani sê-ta mêna mô // sapu ini ŋame ŋa-ndê mêna
people a.few 3S.PT-*sit village old Sapu he* 3S.PR.*come* 3S.PR-*sleep village*

haô sô / ŋa-kadi ŋa-kô mêna mô ŋa-na mba na kê //
new COMP 3S.PR-*return* 3S.PR-*go village old* 3S.PR-*go* SUB 3S.IR.*eat food*

pêhala ànì ini nda mêna haô sô / kadi kô mêna mô mba na
evening one he stay village new COMP *return go village old* SUB 3S.IR.*eat*

kê // hêta tê ini la pô na lake sapa na anawê haya // ini
food when then he paddle water go REL *moon* 3S.POS *brightness good he*

na ya kê pasô mba na-kadi lake tê tatawa anamô // tatawa sê eme
go eat food COMP POT 3S.IR-*return* REL *then cloud big cloud go.up come*

wa kôma sê kôma akese // ini eme uwi gwà sô / gwê hi
cover place closed place dark he come drag.over canoe COMP *take paddle*

mba na-la // la pepe tê salu dê nama ki sô / ka hi
SUB 3S.IR-*paddle paddle time then two lie hand left* COMP *cut paddle*

hi mba na-la dê nama wahê // ôpa ànì dê katalehe watê
changed SUB 3s.IR-*paddle lie hand right crocodile one lie steep.bank long*

sô aale eme // gwê ini ate nama ki namaaho lênê tê gwê lê
COMP *jump come take him go.down arm left upper.arm that then take* COMP

ate pô anuŋgu // na nda wa nda natô kô awanô ma samô // salu
go-down water inside go stay DUB *stay able for hour mark whole they*

sê-nda dê piahô sê-nda idi sê-pa sô sê-hê lake tê sapu
3P-*stay from river.mouth* 3P-*stay back* 3P-*go.in* COMP 3P-*come.out* REL *then Sapu*

saê mba ôpa gwê ini // salu seme sê-hê piahô lênê /
feel SUB *crocodile take him they* 3P.*come* 3P.*come.out river.mouth that*

ini na akapô na taa ma tê ôhô lo
he 3S.POS *leg go touch sandy.spot.where.water.gets.shallow then step.on self*

sô dê ôpa na ahôŋgu lê salala kô eme sê pô anoso //
COMP *from crocodile* 3S.POS *mouth this quickly go come go.up water surface*

tê kalê di di / ôpa ŋi kêsê li pô anuŋgu papa
then start swim swim crocodile dive cut.through move.fast water inside DUR

na sê ipi ɔ̂ // taka ini eme / sapu dumala kô tênê tê / ŋi sê
go go.up side bank cut he come Sapu look at there then dive go.up

ate pô anuŋgu // ôpa li pô wahê / salu so-so
go.down water inside crocodile move.fast water top they 3P-*miss*

lo ini eme ka dumala mba sapu pa ɔ̂ na tê ahana hê di
one.another he come and look SUB *Sapu go.in shore go then hot become swim*

kadi hê // salu sô-kô kô tênê ame sapu na pe pane kô
return come.out they 3P-*make like that until Sapu go become near go*

ma tê kalê aale sê na // ŋia ŋia tê nôhôna
shallow.place then start jump go.up go cry.out cry.out then sisters

sôa seme sêya lê // hêta tê lênê tê sapu na namaaho
all.relatives 3P.*come* 3P.*hit help when then then then Sapu* 3S.POS *upper.arm*

lênê tê pa tuu // ôpa na nahe gwê ini na apisi asi //
that then go.in broken crocodile 3S.POS *teeth take he* 3S.POS *flesh a.little*

nôhôna seme sô-gwe lê tadia ama kô nôhôna sô-gwê lê sê-na
sisters 3P.*come* -*take* COMP *naked like.nothing go sisters* 3P-*take* COMP 3S-*go*

pêsɛ̀ tôgwatô lênê tê nôhôna sôa sô-gwê lê sê-hê kôma
night one.same that then sisters all.relatives 3P-*take* COMP 3P-*come.out place*

miya haô lene seme // eme nda nama haya hê takêsi lene sapu ŋê-nda
sick new this 3P.*come come stay arm good become now this Sapu* 3S.PR-*stay*

ŋgwa lu-dumala kô ini na namaaho lene pe kako / tê êna ahô
FUT 1IP-*look at he* 3S.POS *upper.arm that become crooked then its reason*

lene //
this

I'll tell a story about the crocodile taking Sapu.

When the Labubutu people had left the old village and made the new village, a few people still lived at the old one. Sapu used to sleep in the new village and go back to the old village to eat.

One evening, having been in the new village, he left for the old village to have his meal. When he paddled across the water, the moon was bright. He finished eating and wanted to return when a big cloud covered the moon and made everything dark. He dragged the canoe into the water and took the paddle to start paddling across. He paddled twice with his left hand and changed the paddle to his right hand.

A crocodile sleeping on the long steep bank jumped up and came near. It grabbed his upper left arm and pulled him down into the water. It went on maybe for an hour. They ended up at the river mouth and then back inside and then out again when Sapu felt that the crocodile was going to really take him down. They came out to the river mouth and Sapu's foot touched a shallow spot. Then he braced himself on the sand, got his arm out of the crocodile's mouth, and quickly got to the surface. Then he started swimming.

The crocodile kept cutting through the water to the bank. It cut towards Sapu and he saw it and dove down into the water as the crocodile shot up so that they just missed each other. The crocodile came to see if Sapu had got to shore and angry now swam back out. They went on like this until Sapu got close to a shallow spot and started climbing out of the water.

He cried out and cried out and all his sisters and cousin sisters came to help. At that time Sapu's arm was broken and the crocodile's teeth had taken some flesh. His sisters came and got him naked out of the water. That same night they took him to the new hospital. The arm is all right nowadays.

Sapu is still around. If we see his arm is crooked, that's the reason.

LABU-ENGLISH WORD LIST

A

a[1] and

a[2] CONTR of aha we (1IP)

a[3] sun; day

à tree; wood: à hapo walking stick; à hata wooden pillow

-aale (V2) jump

adô aunt: mother's older sister or wife of father's older brother

aha we, us (1IP)

ahala flower

ahalô 1. testicles; 2. seed

ahana hot

ahata wall; plank; any flat piece of wood

ahe Malay apple (*Yambosa gomata*)

ahêna daughter; niece (man's brother's daughter)

ahênasê niece (daughter of man's sister or of woman's brother or sister)

ahihi price

aho fat; thick (of round things)

ahô[1] base; bottom; reason

ahô[2] language: ahô yupa foreign language

ahômômô mute

ahônôhô cold

ahôŋgu mouth

ahôsulu saliva

ahu[1] heart

ahu[2] conch shell

ai[1] I; me (1S)

ai[2] son; nephew (man's brother's son)

aimanda orphan

ain iron (>E)

ainialô young boy

aisê nephew (son of man's sister or woman's brother or sister)

aitu bastard

aka shoots (of plants)

akaka stubborn

akana sweet

akapô leg

akatô straight

akese dark

ako covering: ako anêndi shirt; ako tahô trousers; ù ako lid of a pot

akô some

akôlôhô egg

alamô younger brother or sister (of male or female)

alani wife of husband's brother

alaŋia noise

alê side of canoe without outrigger

alêta stomach (CONTR lêta)

alo leaf

alomala[1] green

alomala[2] eggs of lice

alôhô (INC) -ya alôhô start

alôma empty; worthless: yà alôma a lie; hanô alôma empty house; kok alôma only a Coke (there's no Bacardi in it)

alôpôŋgi heavy

alu we, us (1ID)

alugu bone

ama[1] father

ama[2] for nothing, in vain

amala[1] uncle: father's younger brother or husband of mother's younger sister

amala[2] sharp

amala[3] 1. first; 2. (INC)-ya mala be first (e.g. in a line)

amamu (someone else's) father

amatô uncle: father's older brother or husband of mother's older sister

ambênê thick

ame (PREP) until

amê firstborn female

amêna man

amênamu sixth born female

ami yam

amika tapioca

ampɔ̀ grease; animal fat

amoa second born male

ana[1] mother

ana[2] pus

anaha empty: pù anaha betelnut husk; ni anaha coconut shell

anahô hollow; hole

anale ember; anything red-hot

analô non-human offspring

anama handle

anamô big

anaŋa edge; side

anaso skin; bark; peel: ni anaso coconut husk

anatê 1. liver; 2. lungs; 3. sweetheart

anawê 1. clean; 2. clearness; 3. brightness

anêndi[1] 1. fruit; 2. solution (to a problem); 3. addition

anêndi[2] true

andi dirty

ani centipede

àni one (indefinite article)

aniani a few

anoso surface of the water

anôhônô 1. hair (of hand, leg, armpit, genitals); 2. fur of animal; 3. feathers of birds

anôsô end of something (e.g. rope)

antɔ̀ lump (on something)

anuŋgu the inside of something

aŋgi third born male

aŋgô fourth born male

aŋgu ripe

apalia stink

apana 1. twigs; 2. wood shavings

apaŋ always

apaŋa name

apapô rubbish (small pieces which might have later use)

apɛ̀ side: apɛ̀ alugu rib

àpɛ̀ sago

apêsa[1] careful(ly)

apêsa[2] again

apiahô mouth of a river (CONTR piahô)

apisi flesh; meat

apo dorsal fin

apolo sago roof

apô 1. grandmother, grandfather; 2. grand-daughter, grandson

apôane head: à apôane tree stump

asa how

asakê sour

asama weapon, such as club

asàmà fast

asamôni twenty: asamô sulu forty; asamô sidi sixty; asamô sôha eighty

ase who

asele chin; jaw

aselele dry

asesi a little bit

asêkato tail

asêŋesia itchy; causing itchiness

asêpe sneeze (INC with -ya)

asi[1] hole

asi[2] a little

asisi 1. scrotum; 2. soft inside part of a sprouted coconut

aso firstborn male

asôlô 1. eighth born male; 2. seventh born female

asôlô[1] juice (of meat or fruit); soup

asôlô[2] 1. seventh born male; 2. sixth born female

asôsô corner

atahu smoke (of fire)

-ate (V2) go down

atêkê thin

atikato chest

atôtôhô wet

awa 1. father's sister; 2. father's sister's husband; 3. mother's brother; 4. mother's brother's wife

awahê warm

awanô[1] 1. shadow; 2. reflection; 3. ghost (of humans)

awanô[2] period of time

awasi horse

awawu in a roundabout way: ini na ahôŋgu awawu he talks in circles

awê[1] nest

awê[2] causing itchiness; itchy: ka awê taro which causes the throat to itch

awôwa root

aya third born female

ayalê energy

ayaŋa strength

ayaŋi odour

ayaŋo 1. shadow; 2. reflection (of objects)

ayêpo lateral fin or tail of fish

ayo wave of the hand

B

bo ball (>E)

bôlê pronged spear for fishing

D

-daa (V2) get spoiled; break down

dala metal drum (e.g. for petrol) (>E drum)

daŋge thank you (> German *Danke*)

dasa lie, falsehood

-dê (V2) lie, be at a place

dê (PREP) from

dêhi (PREP) from (a person)

-di (V1) do some action; fly; swim; catch

di[1] spear

di[2] 1. big variety of betelnut; 2. fruit of a palm

di[3] wooden bowl

dì[1] sugar cane

dì[2] blood

dì[3] beard

dì[4] (R) brought close: ai yêkiha ini dì 'I held her close.'

-dia (V1) action of using a scoop net

dikôô the back bundle of two being carried on each end of a pole (see kêno)

dôŋôndô fog

du[1] people

du[2] shield

dukêla leader

-dumala (V1) look, see

E

-eme (Virreg) come (to place where speaker is)

-eŋe (V1) peep

epe which; where

ê fish: êgwa eel; êhata ray; êku prawn, lobster, crayfish; êmulumu salmon; ênê mackerel; ênôpô shark; ênôpô su epaulette shark; ênôpô panemala tiger shark; ênôpô pusaya hammerhead shark; êsapulu blue marlin; êsôa mullet; êtaa king prawn; êtêtê garfish; êti trevally; êyigu tuna

-êêlê (V1) search for

êkato sky

êmaha we, us (1XP) (CONTR maha)

êmalu we, us (1XD) (CONTR malu)

êmidi we, us (1XT) (CONTR midi)

êna (POS) its

-êndi (V1) be hanging

ênê rubbish skin of taro

êpê bow

êsa way

êsalu they, them (3D) (CONTR salu)

êsatô road

êsidi[1] we, us (1IT) (CONTR sidi)

êsidi[2] they, them (3T) (CONTR sidi)

êsôha they, them (3P) (CONTR sôha)

êta fourth born female

êtê something generally melon shaped: êtê pôpô watermelon; êtê koso cucumber

G

gasugasu whale

-gololê (V2) dress up

gololo all

-gu (V1) answer

gu[1] date (day)

gu[2] rope

gulu hat

gulumu back side (for locating animate subjects) ini heta hanô na gulumu 'He's sitting behind the house.'

gwà canoe

gwaô car

-gwê (V2) take; pick; bring

H

ha bag (e.g. string bag)

ha- (prefix for parts of the leg): hakaku toes; hakêpê heel; hakôsô ankle; halakê hip; hapalô upper part of the foot; hapo shin; hapôô big toe; hasôkê little toe; hatê calf; hatô knee; haata sole; hao toenail

hahêna man's brother's wife

hamu afterwards, later

hana large turtle

hanà footprint

-hane (V2) 1. cross (bridge, river); 2. shoot

hanô house

hapa Labu people's name for themselves

hata pillow

haô new

haya good, well

-hê (V2) 1. come out; 2. become (not permanent)

hêna 1. woman; 2. (INC)-ya hêna 'get married (male subject);

hênamu fifth born female

hêndi hunger: hêndi ya ai 'I'm hungry.'

hêta[1] something right (not wrong)

hêta[2] (PREP, CONJ) during, at the time of

hêtape when (in the past)?

-hi[1] (Vi) weave (basket, mat)

-hi[2] (Vl) accompany; be with

-hi[3] (Vl) stick in the ground so that it stands up

hi[1] paddle; fin of a fish

hi[2] (R) turned or changed (used with ka) ini yaka hi hi 'He changed the paddle (to the other side).'

hihi 1. how much, how many; 2. (INC)-ya hihi 'buy'

hininôpô firefly

hiya second born female

hono (INC)-ya hono 'steal'

-hô[1] (Vl) step on

-hô[2] (V2) write

hô banana

hôgwa market; trading

hôni different

hônô (R) killed

-hu (Vl) blow

hu 1. stone; hu nalô small stone, gravel; 2. money

huku the middle of something

-huŋgu (Vl) eat meat only

husê swollen

I

i[1] axe

i[2] raft

idi · back (to someplace)

idiawa mangrove

igu driftwood

ini he, him, she, her, it (3S)

ini-lê this one (near the addressee)

ini-ne this one (near the speaker)

ipi part, area, half

iya dog

iyamôŋa wallaby

K

-ka (V2) 1. break; cut; tear: ka...poso tear: ai yaka upu poso 'I tore the cloth.'; 2. turn: ka...hi turned; changed: ai yaka upu hi 'I turned the cloth (put it on inside out).'

ka[1] taro

ka[2] (CONJ) as, at the same time, and

-kadi (V2) return

kahini yellow

kaka[1] lazy

kaka[2] hard

kakala chicken

kako crooked (not straight)

kalaka scales: amêna kalaka man with ringworm

-kalê[1] (V2) scratch

-kalê[2] (V2) start

kalô grass skirt: hêna na kalô ate 'The woman is menstruating.' (lit. The woman's grass skirt is down.)

kalôsamba gills

-kalu (V2) bite (grab on with the teeth)

kalu small crabs found along the beach (ghost crab)

kalumba hermit crab

kanôla small variety of seagull

kapama light (not heavy)

kapô kapok (>E)

kapôa tribe

kapuma soft

kasa fight (INC with -ya)

-kasi (V2) bite (into pieces)

kata 1. row of houses; 2. level of a house: kata wahe upper floor

katahô 1. mainland; 2. inland area

katalehe steep bank cut by a river

kataya wall

kate wife's sister's husband

kato tip of something

katô straight (not crooked)

kawala spider

kege small

kekele bell

kela (V1) break (with two hands), snap (used with R tuu 'broken') ai ŋgwa ndêkela kêlêpê tuu 'I'll break the pencil.'

keno meat or seafood served with a meal

kese dark

-kê$_1$ (V2) dig

kê$_2$ yes

kê (CONJ) or

kề^1 thing: kề awano movie (lit. thing of reflections)

kề^2 food: kề aka greens; kề akana sugar (lit. something sweet); kề asakê tea (lit. something sour); kề masi food (with no keno)

kêabu hibiscus

-kêki (V1) kick

kêla rudder

kêlaya false

-kêlê (diminutive): ha-kêlê small string bag; iya-kêlê runt

kêlêgu back (of animate N)

kêlêkê pandanus found near the beach

-kêlêlê (V1) 1. to be plenty or become plenty; 2. win

-kêlêlê (V1) knock

kêmuhu large variety of seagull

kêno the front bundle of two being carried on each end of a pole (see dikôô)

kêpi bush, jungle

kêsê (R) cut through

kêta greedy

-ki (V1) carry in hand

ki^1 1. (INTJ) no; 2. (NEG) negative marker

ki^2 grub found in sago

ki^3 left: nama ki left hand

kiakwa temple (part of face)

-kiha (V1) hold; hug

kikia 1. tongs (for holding hot stones); 2. scissors

kikili deep place

kilimamô white heron

ko court (>E) hanô ko court house

koko Chinese

kole work (noun)

kolenalô Saturday

kolepemaipi Friday

kolepesalu Tuesday

kolepesidi Wednesday

kolepesôha Thursday

kolo one's own

kombo round

-kô^1 (V1) work; make: -kô dasa lie (tell falsehoods); -kô lidia cough; -kô molo brag; -kô sêsê play; -kô yà talk

-kô[2] (V2) go to; go towards

kô 1. (PREP) at, to, of, with, for, about, during; 2. (CONJ) for, because

kôa[1] a boil

kôa[2] bandicoot: kôa hanô rat

kôakôa red

kôkô necklace

-kôla (V1) dress up

kôla slit gong

kôlakôla loose (not secured)

-kôlôlô (V1) descend

kôma[1] 1. wind: kôma ŋêli wind blows; 2. weather: kôma haya good weather

kôma[2] place: kôma kapia office; kôma miya hospital; kôma mu sacred or haunted place

-kôna (V1) look (at); see

kôpôa tradition; custom

kôsumu back of the head

-ku (V2) 1. carry on head; 2. shade eyes with hand

ku small shell like scallops

kù women's fishing net made from cane

kuluku louse

kuluya joint

-kusu (V1) spit

kutu fresh-water lake

kwa reeds used for arrows

kwà wild reed found on river banks

L

-la[1] (V1) cry

-la[2] (V2) paddle

la[1] ancestral spirit

la[2] pandanus found in swampy areas; the root of pandanus used to tie sago leaves for roofing

la (POS) 1IP possessive marker

lae line, queue (>E)

laê that (near neither speaker or addressee)

lahadi slipper lobster

-lake (V2) roam, move around

lake (REL) relative clause introducer

lala mosquito net

-lalaŋi (V1) cry, weep

lame (Virreg) 1IP of -eme come

laŋa (Virreg) 1IP NR of -ya eat, hit

lapô holy, sacred: lô lapô church

lasala younger brother of male

lasatô older brother of male

lasinala younger sister of female

lasinalamatô older sister of female

-le (V2) refuse, not want to do something

lene this (near both speaker and addressee)

lê (COMP) completive aspect marker

lêgi (Virreg) 1IP PT of -ya eat, hit

lêna (Virreg) 1IP IR of -ya eat, hit

-lênda (V1) leave, lose

-lêndi (V1) hear

lênê that (near addressee but not speaker)

lêta belly; seat of emotions (CONTR of alêta)

lêtanahi want; desire (noun)

-li (V1) run; blow (of the wind)

-lidi (V1) put around the neck (e.g. necklace)

lidi 1. sand, gravel; 2. weight put on something to keep it from blowing away

lidia cough

-lindi (Vl) shake

lo reflexive pronoun

lô[1] self (limiter): ai yataka ai lô cut myself; amêna lô widower

lo[2] room

lɔ̂ school

lôkô by oneself (Mlim)

-lôlô (Vl) leak out

lôpôsô area underneath a house on stilts

-lôwalo (Vl) rest

-lu (Vi) 1. fill (liquid) into something; 2. string fish (or game)

lu water bottle; container

lù 1. rope for stringing fish; 2. special vine for pulling a log out of the bush to make a canoe

lugu father-in-law; lugu hêna mother-in-law

-lumu (Vl) 1. smell; 2. follow

lundu island

lusa a lot; frequently

M

ma[1] CONTR of êmalu or êmaha we (lXD, lXP)

ma[2] bird: malêsa flying fox; malô cockatoo; masundu bird of paradise

ma[3] mat

ma[4] shallow place in the water

mà 1. line; mark; 2. (INC)-ya ma mark out

madi widowed: hêna madi widow

maê waves

magaho cow

maha CONTR of êmaha we (lXP)

-mahanô (Vl) die

maikêsê broken (string, rope, etc)

maipa (numeral clitic) five plus: maipa tômôlô six; maipa salu seven; maipa sidi eight; maipa sôha nine

maipi five: maipi anêndi tôgwatô six; maipi anêndi salu seven; maipi anêndi sidi eight; maipi anêndi sôha nine

mala guardian: ini mala ta ainialô She looks after the child.

malahô 1. eye; malahô sêgê blind man; 2. face

malaka sprout

malamê vein

malano[1] front: ai nda malano in front of me

malano[2] tears

malapalô eyelid

malapaŋe cheek

malapo forehead

malasê medicine (>E)

malasêgê blind man

malasêsê eyelash

malata 1. unripe; 2. green

malatô eyebrow

malu[1] CONTR of êmalu we (lXD)

malu[2] (INC) -gwê malu sleep

mamaŋi laugh

mambele marble (>E)

mandawa torch (electric)

mame (Virreg) lXP of -eme come

mandi tongue

maŋa (Virreg) lXP IR of -ya eat, hit

maŋgula small striped ray

masi[1] dried up (e.g. coconut)

masi[2] 1. gift; 2. (INC)-ya masi make holy: ini ya masi kô a He keeps the day holy.

matô old woman

mawê (Virreg) 2P nonpast of -eme come

maya shame

mayà dead

mayapô low tide

mayê general name for seafood from mangrove areas (shellfish, etc.)

mba[1] (POT) potential modal

mba[2] (SUB) subordinating conjunction

mba[3] pig

mbamba crazy

mê (POS) 1XP 2P possessive marker

mêgi (Virreg) 1XP PT of -ya eat, hit

-mêla (V1) frighten

mêna[1] (Virreg) 1XP IR of -ya eat, hit

mêna[2] village

mênà (COMP) completive aspect marker

-mêŋa (V2) drop

mêsôhô full

mêtana morning star

mêtê religious

mi 1. kind of pandanus and its long red fruit (Tok Pisin marita); 2. mat made from the leaves of this pandanus

mì (INC)-ya mì tell stories

miŋalô smallish turtle, speckled

miŋgalô meeting

miya sickness

-molo (V1) be afraid

molo carving

moloya fear

mose big

-mô (V2) lead; go first

mô old

-môa (V2) wipe

-môa (V2) praise

môa (Virreg) 2S IR of -ya eat

môdi CONTR of êmôdi you three (2T)

môgi[1] (Virreg) 2P NR, PT of -ya eat, hit

môgi[2] 1. husband; 2. (INC)-ya môgi get married (female subject)

môha CONTR of êmôha you all (2P)

-môhô[1] (V1) hide

-môhô[2] (V1) awaken

môlu CONTR of êmôlu you two (2D)

mômô a person who can't speak or who is quiet and keeps to himself

mômôa (Virreg) 2P IR of -ya eat, hit

mônda Monday

môtô man's sister's husband

môwê (Virreg) 2P PT of -eme come

mu spirit belonging to a particular clan

mula north-east wind

muluposo broken into pieces (pot, egg, glass, etc.)

N

-na (Virreg) go (for a purpose): -na o vacate the village for a new location; -na yà find fish with a torch

na[1] (Virreg) 3S IR of -ya eat, hit

na[2] (POS) 3S possessive marker

nahe teeth: nahe huku front teeth; nahe katahô back teeth

naki NR negative marker

nalô 1. small; 2. child

nama hand: namaaho upper arm; namahata palm of hand; namahuku middle fingers; namakaku finger; namakôsô wrist; namao fingernail; namapalô upper part of hand; namapôô thumb; namasukê little finger; namatô elbow

namatê axe

name (Virreg) 3S IR of -eme come

nani goat (>E nanny)

naŋa ear: naŋa kato tip of the ear; naŋa pele pierced ear; naŋa tôtô deaf

naŋaso nylon string

natô able, like, measure up to

natôkolo the same; identical

nawê (Virreg) 2S IR of -eme come

-naya (V2) ask

-nda (V1) stay, come to stay, be at

nda (POS) 1S possessive marker

-ndaa (Virreg) be forgotten, left out

ndame (Virreg) 1S IR of -eme come

ndaŋa (Virreg) 1S NR of -ya eat, hit

-ndê (V2) sleep, lay

ndêlene yesterday

-ndêna (V1) put in a line; line up

ndêna (Virreg) 1S IR of -ya eat, hit

-ndi[1] (V1) sharpen

-ndi[2] (V1) push

-ndi[3] (V2) cook

-ndi[4] (V2) urinate

ndi mountain

ndia large red ant

ndumuli Jew's harp

-ne (V2) sail

nene half coconut shell; cup

nênê body, skin

nênêŋgwa fly (insect)

nênêyôlô blood (mainly menstrual blood)

nênêsese sore; pain; sickness

nêŋa wife's sister's husband

nêtape when (nonpast)?

ni coconut: ni akalo very young coconut; ni amalako sprouted coconut; ni ampô green drinking coconut; ni masi mature coconut; ni saŋata almost mature coconut

-no (V1) scape (coconut)

nono (INC) -ya nono set a date

-nô[1] (V1) drink

-nô[2] (V2) go to a place where the speaker and addressee are not at but where the addressee has been or will be

nôhô brother of female

nôhôna sister of male

nômusu ten

nôŋôlô dust

nôpô grandson; grand-daughter

nôsôlô rubbish; waste

-nu (V2) vomit

-nunu (V1) kiss

ŋ

-ŋa (Virreg) open (mouth, basket, etc.)

ŋa ladder; stairs

ŋahê flooded

ŋaki IR negative marker

ŋame (Virreg) 3S NR of -eme come

ŋamôa (Virreg) 2S NR of -ya eat, hit

ŋaŋa (Virreg) 3S NR of -ya eat, hit

ŋataka bitter (> -taka cut)

ŋatô old man

ŋawê (Virreg) 2S NR of -eme come

-ŋe (V2) sing; call out to

ŋêndi useful; valuable

ŋgôa ulcer

ŋgu snake

ŋgwa (FUT) future modal

-ŋi (V2) tie, fasten

-ŋi (V2) dive

-ŋia (V2) call out

-ŋô (V1) ask (for something)

ŋô New Guinea walnut *(Dracontomelon magniferum)*

O

o[1] perspiration

o[2] bridge

ò hook

ô[1] breadfruit

ô[2] crab: ôlô large crab (trawl crab?); ôlô ulu sand crab; ôni coconut crab

ô̲ garden

ôhô[1] (INTJ) No! That's not right!

ôlô[2] black

ôlô small brown tree kangaroo

ôlôndi fifth born male

ôpa 1. crocodile; 2. the 1 kina coin (which has an illustration of a crocodile on it)

ôpà thoughts

ôpàlà belch

ôta[1] ground, earth

ôta[2] vagina

ôwê (Virreg) 2S PT of -eme come

P

-pa (V2) go inside: -pa o go to shore; go to the garden; -pa...tuu break (go broken)

-paa (V2) cook, put on the fire

padi rice (>E paddy)

pake bucket (>E)

pake wing

pakê beach alongside the village

pakia shoulder

palahe lips

pale (INC)-ya pale not know

paloa ninth born male

pane 1. short; 2. nearby

papa (DUR) durative aspect marker

papia slow(ly)

-pase (V2) 1. read; 2. count

pase navel

pasô (COMP) completive aspect marker

-pe[1] (V2) talk

-pe[2] (V2) become

-pegu (V2) ripen

pele plate; eating utensils (>E plate)

pelee 1. swampy; 2. soft: ainialô pelee baby

pepe time: pepe salu two times

pepele veranda

-peselele (V2) dry up

-pê (V1) shoot (long range w/ bow or gun)

-pê (V2) defecate

pêhala afternoon; evening

-pêla (V1) carry on shoulder

-pêlêpê (V1) roll (something)

pêmômô plenty

-pêsa (V1) build, construct

pêsê̂ night

-pêtê (V2) wake up, arise

-pi (V1) break

pi[1] animals for eating (pig, cow, sheep)

pi[2] bird similar to a cockatoo

-pia (V1) fall

piapia slowly

-pilipi (V1) be near

pinasê speedboat

pipi butterfly: pipi komape moth

pisi[1] white

pisi[2] cat

pisì Markham River

poloo hair of the head

poso broken (egg, glass, etc)

pô water

pôa sweet potato

pôa coral

pôadi neck: pôadi alugu nape of the neck; pôadi antô̂ Adam's apple

pôane head

pôgwa knife: pôgwa atô bush knife; pôgwaya knife for peeling taro

pôkôa armband; bracelet

pôlôpa swordgrass

pôni heap

pôpô[1] small yams

pôpô[2] children's game shooting mangrove seeds

pôpô̂ whiteman

pôsô under part or lower part

pôsôahô thigh; groin

-pu (V1) pull out (a plant or tree)

pu nuts of a tree found along the Markham River

pù betelnut

pupu white tree kangaroo

pupuyu rainbow

-puyu (V1) shoot (with a spear at close range)

S

-sa[1] (V2) carve out or shape (e.g. canoe)

-sa[2] (V2) lean or lie down

sa[1] first

sa[2] what, which

sa[3] outrigger

sa[4] basket made of coconut fronds

saasê grass

-saê (V2) feel

sahô nose: sahô anahô nostril; sahô anôhônô moustache

sala comb

salala (R) missed, misfired, done too quickly

sale broom

-sale (V2) sell

salu 1. two; 2. CONTR of êsalu they (3D)

same (Virreg) 3P IR of -eme come

-samô (V2) 1. stroke, pet; 2. sweep

samô whole, completely

sani which, what

sanônô pilchard

-saŋa (V2) chew

-sapa (V2) 1. follow; 2. stick; become stuck

sapa[1] 1. moon; 2. month

sapa[2] leafstalk of the sago (Tok Pisin pangal)

sapô fishing net: sapô suluya scoop net for prawns

sawahê morning

sawi lizard

se[1] bandicoot trap

se[2] canvas, sail (>E sail)

se tree with red fruit (used for facial decoration)

sema fast, quickly

seme (Virreg) 3P NR, PT of -eme come

sese bad

-sê (V2) go up

sê[1] (R) closed, blocked

sê[2] (POS) 3P possessive marker

sê[3] floor

sê[4] lightning

-sêê (V1) point at (w/ finger)

sêê fence

-sêgê (V1) stare at

sêgi (Virreg) 3P PT of -ya eat, hit

sena[1] (Virreg) 3P IR of -ya eat, hit

sena[2] love charm

-sêni (V1) plug up

sêniya plug

-sêsê (V1) pour

sêsê game

sêya (Virreg) 3P NR of -ya eat, hit

-si[1] (V1) pull (facing the object being pulled)

-si[2] (V1) have a fit

-si[3] (V2) fill something (into a container)

-si[4] (V2) make noise with something

-sia (V2) knock down fruit from a tree with a stick

sia post

-siapô (V2) wash (oneself)

sidi 1. three; 2. CONTR of êsidi they (3T)

sisi[1] high tide

sisi[2] legend, tale

-so[1] (V1) miss (e.g. the boat)

-so[2] (V1) cut into small pieces

so[1] something wrong

so[2] needle

sò rattan, cane *(Calamus)*

-sô (V2) put in heaps

sô[1] (COMP) completive aspect marker (CONTR of pasô)

sô[2] corner of the room for putting food or sleeping

sô[3] stick for winding fishing line

sô[4] shoe (>E)

sõ arrow

-sôa (V2) get rid of

sôa all (for relatives)

sôala 1. mother's younger sister; 2. wife of father's younger brother

sôha 1. four; 2. CONTR of êsoha they (3P)

-sôhô[1] (V1) build

-sôhô[2] (V1) put down a load

-sôhô[3] (V1) cover

sôhôya builder

sôkôla frog; toad

sôlô roof

-sôma (V1) wash (comething)

sônô dusk

-sôô (V1) 1. bury; 2. cover with leaves for cooking

-sôsô (V1) 1. force; 2. push

sôsôna armpit

sôsôpô dawn

-su[1] (V1) deal out one at a time

-su[2] (V1) take out (e.g. a splinter) with a needle

-su[3] (Vl) be insufficient for: pô ŋusu ai I'm thirsty. (lit. Water isn't enough for me.)

su[1] seaweed

su[2] breast: su palahe nipple

sugu cassowary

suka sugar (>E)

-sulu (Vl) scoop up (fish, animal) with net or cloth

suluya scoop net

sumundu big, reddish possum

sumusi mosquito

sunda 1. Sunday; 2. week

sundatô Christmas

susuni small possum which eats coconuts

-suu (vl) crawl

T

-ta (Vl) sit; be situated at

ta[1] sail

ta[2] bag; coconut leaf basket for betelnut

ta[3] excrement

-taa (V2) slap, touch

taa star

-taase (V2) find

tabôalô penis

tadi buttocks

tadia naked

taê there (not near the speaker or the addressee)

tahô buttocks

tahu 1. smoke; 2. village tobacco (Tok Pisin brus)

taiya tyre (>E)

-taka (V2) 1. cut (as with a knife or axe); 2. be bitter, spicy

takêsi now: takêsi lene just now

-tala (V2) 1. carve; 2. go up a tree to trim branches

tala gun

tamayê big basket

tamêŋgasu seahorse

-tani (V2) throw

taŋasô[1] big blue fly

taŋasô[2] catfish

-taŋgô (V2) swallow

taŋgôya glutton

tapana anus

tapôamiŋgi twins

tase cup

tataku sandfly

tatawa cloud

tatô big

tatôlamu speaker of the same language (Tok Pisin wantok)

tawala door: tawala nalo window

-taya (V2) wait for

tebo table (>E)

tene here (near speaker, not addressee)

tê then (pro-temporal)

-têkê (Vl) send

-têndia (Vl) feel with hands

tênê there (near speaker, not addressee)

têô table (>E)

têpê rope

-ti[1] (Vl) be located (at)

-ti[2] (V2) peel

ti tin (>E)

-tia (Vl) know

tidia[1] general term for bivalve shellfish

tidia[2] earthquake

-tiha (V1) teach

-tii (V1) stand up

tindia mushroom

-tipi (V2) 1. jump around (like a fish out of water); 2. act impulsively

titinalô ant

to torch

tolo (INC)-ya tolo fight

tô small bamboo used for spear

-tôa (V1) 1. strike something in anger; 2. knock dirt off (feet) before entering a house

tôa lime spatula

tôgwatô 1. one, only; 2. (CONJ) but

tôtô one at a time; one each

-tôwi (V1) be hanging

tu land breeze

tulumu back side of (for inanimate subjects)

tupu pepper fruit chewed with betelnut (Tok Pisin daka)

-tutu (V1) fire something at (e.g. throw a stone at)

tuu (R) broken

U

u rain

ù pot

ulu 1. sea; 2. beach; 3. salt

uluke blue (like sea)

upu sarong

upui 1. G-string; 2. Japanese

-uwi (V1) 1. pull canoe out of water; 2. drag something over something else; 3. scratch (back)

W

-wa (V2) block

wa[1] (Virreg) 2S IR of -ya hit

wa[2] (MOD) dubitative modal

wa[3] lime (for betelnut)

wa[4] platform of a canoe

wa[5] maternal uncle (not the speaker's)

-wahe (V2) mention

wahê[1] right (opposite of left)

wahê[2] top

wahê[3] weeds

wakô hourglass-shaped drum (Tok Pisin kundu)

walê supports for outrigger

wambô INTJ of surprise

-wasê (V2) Plant

wasôa sister's husband (not the speaker's); wasoa hena brother's wife

watê tall; long

wawi small turtles (fresh-water)

wè traditional singing and dancing

-wêsi (v1) carry on back in string bag

-wêti (V1) pull something behind

wili penis

wowa thunder

Y

-ya (Virreg) (3S PT) eat, hit, do with force: -ya alôhô start; -ya asêpê sneeze; -ya amala be at the beginning; -ya ê go fishing; -ya hêna get married (for male subject); -ya hini buy; -ya hono steal; -ya mà mark out; -ya masi make holy; -ya mì tell stories; -ya môgi get married (female

subject); -ya nama wave the hand; -ya nono set a date; -ya palê not know; -ya tolo fight; -ya wè do traditional singing and dancing; -ya yao forbid; -ya yo take care of

yà[1] fire

yà[2] talk

yà[3] sea breeze

yaka bottle; broken glass

yakato midday; afternoon

yala[1] young girl

yala[2] shell found on mangrove trees

yalà year

yàla lamp (kerosene)

yale smoke of a fire

yalê Tahitian chestnut (Tok Pisin galip)

yame (Virreg) 1S PT of -eme come

yanalô girl

yao 1. something forbidden, taboo; 2. (INC) -ya yao forbid

yasê closed

yàsê charcoal

yasô open

yaya yellow

yê you (1S)

yêgi (Virreg) 1S PT of -ya eat, hit

yêmôha you all (2P)

yêmudi you three (2T)

yêmulu you two (2D)

yêŋgu mast

-yi[1] (V1) covet

-yi[2] (V1) run away from

yi outside

yo boss

-yô (V1) give; put

-yôôhô (v1) shout; talk loudly

yôwi mango

yupa foreigner

ENGLISH-LABU WORD LIST

A

able natô

accompany -hi

Adam's apple pôadi antồ

addition anêndi

afternoon pêhala (late); yakato (early)

again apêsa

all gololo; sôa (for relatives)

always apaŋ

and a; ka

animal pi (for eating; e.g. pig, cow, sheep)

ankle hakoso

answer -gu (VI)

ant titnalô; ndia (large red ant)

anus tapana

area ipi

arm namaaho (upper arm)

armband pôkôa

armpit sôsôna

arrow sồ

ask -naya (V2); -ŋô (V1) (ask for something)

as kâ

at kô

aunt adô (mother's older sister or wife of father's older brother); awa (father's sister; mother's brother's wife); sôala (mother's younger sister or wife of father's younger brother)

awaken -môhô (VI)

axe i; namatê

B

baby anialô pelee

back kêlêgu (person's); gulumu (side); tulumu (side); idi (returning)

bad sese

bag ha (string bag); ta (for betelnut)

ball bo

bamboo tô (small variety used for spears)

banana hô

bandicoot kôa

bark anaso (of tree)

base ahô

basket sa (made of coconut fronds); ta (made of coconut leaves for betelnut); tamaye (large variety)

bastard aitu

bat malêsa

beach ulu; pakê (alongside the village)

beard dì

become -pê (V2); -hê (V2) (not permanent)

belch ôpàlà

bell kekele

betelnut pù; di (big variety)

big anamô; mose; tatô

bird ma

bird of paradise masundu

bite -kalu (V2) (grab with teeth); -kasi (V2) (bite into pieces)

bitter ŋataka

black ôlô

blind malahô sêgê (blind man); malasêgê

block -wâ (V2)

blood di; nênêyôlô (menstrual blood)

blow -hu (V1)

blue uluke (like the sea)

boast -kô molo (INC)

body nênê

boil kôa (on the body)

bone alugu

boss yo

bottle yaka

bottom ahô

bow êpê

bowl di (wooden)

boy ainialô

bracelet pôkôa

breadfruit ô

break -ka (V2); -kela (V1) (break with two hands)

break down -daa (V2)

breast su

breeze tu (land breeze); yà (sea breeze)

bridge o

bring -gwê (V2)

broken maikêsê (string, rope, etc.); muluposo (of containers: pot, egg, glass, etc.); poso (R) (of containers); tuu (R) broken off (of sticks, rope, etc.)

broom sale

brother lasala (younger brother of male); lasatô (older brother of male); nôhô (of female)

brother-in-law kate (man's wife's sister's husband); môtô (man's sister's husband); nêŋa (wife's sister's husband); wasôa (sister's husband: not the speaker's)

bucket pake

build -pêsa (V1); -sôhô (V1)

builder sôhôhya

bury -sôô (V1)

bush kêpi

but tôgwatô

butterfly pipi

buttocks tadi; tahô

buy -ya hini (INC)

C

calf hatê (of leg)

call -ŋe (V2), -ŋia (V2)

canoe gwà

careful apêsa

car gwaô

carry -ki (V1) (in hand); -ku (V2) (on head); -pêla (V1) (on shoulder); -wêsi (V1) (on back in string bag)

carve -tala (V2); -sa (V2) (carve out or shape: e.g. a canoe)

carving molo

cassowary sugu

catch -di (V1)

cat pisi

catfish taŋasô

centipede ani

charcoal yàsê

cheek malapaŋe

chest atikato

chew -saŋa (V2)

chicken kakala

child nalô

chin asele

Chinese koko

Christmas sundatô

church lô lapô

clean anawê

clear anawê

closed yasê; sê (R)

cloud tatawa

club asama (weapon)

cockatoo malô

coconut ni; ni akalo (very young); ni amalako (sprouted); ni ampô (green, drinking); ni masi (mature); ni saŋata (almost mature)

cold ahônôhô

comb sala

come -eme (Virreg) (see section 4.1.4); -nda (V2) (come to stay)

come out -hê (V2)

completely samô

conch ahu

container lu

cook -ndi (V2); -paa (V2) (put on fire)

coral pôa

corner asôsô; sô (corner of the room for putting food or sleeping)

cough lidia

count -pase (V2)

court ko

cover -sôhô (V1)

covering ako

covet -yi (V1)

cow magaho

crab ô; ôlô (large variety); ôlô ulu (sand crab); ôni (coconut crab); kalu (ghost crab)

crawl -suu (V1)

crazy mbamba

crocodile ôpa (V2)

crooked kako

cross -hane (V2)

cry -la (V1); -lalaŋi (V1)

cucumber êtê koso

cup tase; nene (made from coconut shell)

custom kôpôa

cut -ka (V2); -so (V1) (into small pieces); -taka (V2) (with knife or axe); kêsê (R) (cut through)

drag -uwi (V1)

dress -kôla (V1); -gololê (V2) (in finery)

driftwood igu

drink -nô (V1)

drop -mêŋa (V2)

drum wakô (musical); dala (metal container)

dry aselele; masi (desiccated)

dry up -peselele (V2)

during hêta

dusk sônô

dust nôŋôlô

D

daka tupu

dark akase; kese

date gu (day)

daughter ahêna

dawn sôsôpô

day a

dead mayà

deaf naŋa tôtô

deal -su (V1)

deep kikili (place)

defecate -pê (V2)

descend -kôlôlô (V1)

desire lêtanahi (N)

die -mahanô (V1)

different hôni

dig -kê (V2)

dirty andi

dive -ŋi (V2)

do -di (V1)

dog iya

door tawala

E

ear naŋa; naŋa kato (tip of the ear); naŋa pele (pierced ear)

earth ôta

earthquake tidia

eat -ya (Virreg) (see section 4.1.4)

edge anaŋa

eel êgwa

egg akôlôhô; alomala (of lice)

eight maipa sidi; maipa anêndi sidi

eighty asamô sôha

elbow namatô

ember anale

empty alôma; anaha (container)

end anôsô (of something, e.g. a rope)

energy ayalê

establish -ya alôhô (INC)

evening pêhala

excrement ta

eye malahô

eyebrow malatô

eyelash malasêsê

eyelid malapalô

F

face malahô

fall -pia (V1)

false kêlaya

fast asàmà; sema

fasten -ŋi (V2)

fat aho

father ama; amamu (someone's else's)

father-in-law lugu

fear moloya

feathers anôhônô

feel -saê (V2); -têndia (V1)(with hands)

fence sêê

fight kasa; -ya tolo (INC)

fill -lu (V1) (liquid); -si (V2) (something into a container)

fin hi; apo (dorsal); ayêpô (lateral)

find -taase (V2)

finger namakaku; namahuku (middle fingers); namasukê (little finger)

fingernail namao

fire yà (N); -tutu (V1) (e.g. fire a gun, stone from a slingshot)

firefly hininôpô

first amala (in order); sa (in time)

fish ê

five maipi

flesh apisi

flooded ŋahê

floor sê

flower âhâlâ

fly -di (V1)

fly nênêŋgwa (insect); taŋasô (big blue variety)

flying fox malêsa

fog dôŋôndô

follow -lumu (V1); -sapa (V2)

food kɛ̀

foot akapô

footprint hanà

for kô

forbid -ya yao (INC)

forbidden yao

force -sôsô

forehead malapo

foreigner yupa

forgotten -ndaa (Virreg)

forty asamô sulu

four sôha

frequently lusa

Friday kolepemaipi

frighten -mêla (V1)

frightened -molo (V1)

frog sôkôla

from dê; dêhi (a person)

front malano

fruit anêndi

full mêsôhô

fur anôhônô

G

G-string upui

galip yalê

game sêsê

garden ɔ̀

ghost awanô

gift masi

gills kalôsamba

girl yanalô; yala (young girl)

give -yô (V1)

glutton taŋgôya

go -ate (V2) (go down); -na (Virreg) (go for a purpose); -pa (V2) (go inside); -se (V2) (go up)

goat nani

good haya

grand-daughter apô; nôpô

grandfather apô môgi

grandmother apô êna

grandson apô; nôpô

grass saasê; pôlôpa (swordgrass)

grass skirt kalô

gravel lidi

grease ampồ

greedy kêta

green alomala

groin pôsôahô

ground ôta

guardian mala

gun tala

H

hair poloo (of head); anôhônô (body hair)

handle anama

hand nama; namapalô (upper part)

hang -tôwi (V1)

hanging -êndi (V1)

hard kaka

hat gulu

head apôane; pôane; kôsumu (back of the head)

heap pôni

hear -lêndi (V1)

heart ahu

heavy alôpôŋgi

heel hakêpê

he ini

here tene (near speaker, not addressee)

hermit crab kalumba

heron kilimamô (white heron)

hibiscus kêabu

hide -môhô (V1)

hip halakê

hit -ya (Virreg) (see section 4.1.4)

hold -kiha (V1)

hole anahô; asi

hollow anahô

holy lapô

hook ò

horse awasi

hospital kôma miya

hot ahana

house hanô

how asa

how many hihi

how much hihi

hug -kiha (V1)

hunger hêndi

husband môgi

husk ni anaso (coconut); pù anaha (betelnut)

I

identical natôkolo

I ai

inside anuŋgu

insufficient -su (V1) (be insufficient for)

iron ain; aiŋe

island lundu

itchy asêŋesia; awê

its êna

J

jaw asele

Jew's harp ndumuli

joint kuluya

juice asɔ̂lɔ̂

jump -aale (V2); -tipi (V2) (jump around like a fish out of water)

jungle kêpi

kapok kapô

kick -kêki (V1)

killed hônô (R)

kiss -nunu (V1)

knee hatô

knife pôgwa; pôgwa atô (bush knife); pôgwaya (knife for peeling taro)

knock -kêlêlê

know -tia

L

ladder ŋa

lake kutu (fresh water)

lamp yala

language ahô

later hamu

laugh mamaŋa; -ndia (ma)maŋi (V2)

lay -ndê (V2)

lazy kaka

lead -mô (V2)

leader dukêla

leaf alo

leak -lôlô (V1)

lean -sa (V2)

leave lênda (V1)

left ki (opposite of right)

leg akapô

legend sisi

level kata (of house)

lid ù ako (of a pot)

lie dasa (falsehood); yà alôma

lie down -ndê (V2)

light kapama (not heavy)

lightning sê

lime wa (for betelnut)

line up -ndêna (V1)

lips palahe

liver anatê

lizard sawi

lobster êku; lahadi (slipper lobster)

located -ti (V1)

loner mômô

long watê

look -dumala (V1); kôna (V1)

loose kôlakôla (not secured)

lose -lênda (V1)

louse kuluku

lump antɔ̂

lungs anatê

M

mackerel ênê

mainland katahô

make -kô (V1)

Malay apple ahe

man amêna

mango yôwi

mangrove idiawa

marble mambele

market hôgwa

mark mà

marry -ya hêna (INC) (male subject); -ya môgi (INC) (female subject)

mast yêŋgu

mat ma; mi (made from pandanus with long red fruit)

me ai

meat apisi

medicine malasê

meeting miŋgalô

mention -wahe (V2)

midday yakato

middle huku

miss -so

missed salala (R)

Monday môndа

money hu

month sapa

moon sapa

morning sawahê

morning star mêtana

mosquito sumusi

mosquito net lala

mother ana; namu (someone else's)

mother-in-law lugu hêna

moth pipi komapê

mountain ndi

moustache sahô anôhônô

mouth ahôŋgu; apiahô (of river)

mullet êsôa

mushroom tindia

mute ahômômô

N

naked tadia

name apaŋa

navel pase

nearby pane

neckless kôkô

neck pôadi

needle so

nephew ai (son of man's brother); aisê (son of man's sister or woman's brother or sister)

nest awê

net sapô (fishing net); kù (women's fishing net made from cane); suluya (scoop net)

new haô

niece ahêna (daughter of man's brother); ahênasê (daughter of man's sister or of woman;s brother or sister)

night pêsê

nine maipa sôha; maipi anêndi sôha

nipple su palahe

noise alaŋia

no ki

nose sahô

nostril sahô anahô

now takêsi

O

odour ayaŋi

office kôma kapia

offspring analô (nonhuman)

of kô

old mô (nonhuman)

old man ŋatô

old woman matô

one tôgwatô; ànì (indefinite MQuan)

only tôgwatô

open yasô; sô (R); -ŋa (Virreg) (open mouth, basket, etc.)

or kê

orphan aimanda

outrigger sa

outside yi

P

paddle hi (N); -la (V2)

pain nênêsese

palm namahata (of hand)

pandanus kêlêkê (found near beach); la (found in swampy areas); mi (with long red fruit)

part ipi

peel anaso (N); -ti (V2)

peep -eŋe (V1)

penis tabôalô; wili

people du

perspiration o

pick -gwê (V2)

pig mba

pilchard sanônô

pillow hata; à hata (wooden)

place kôma

plank ahata

plant -wase (V2)

plate pele

platform wa (of canoe)

play -kô sêsê

plenty pêmômô

plug sêniya (N); -sêni (V1)

point -sêê (V1)

possum sumundu (big, reddish variety); susuni (small variety which eats coconuts)

post sia

pot ù

pour -sêsê (V1)

praise -môa (V2)

prawn êku

price ahihi

pull -si (V1) (facing the object being pulled); -wêti (V1) (pull something behind)

pull out -pu (V1) (a plant)

pus ana

push -ndi (V1)

put -yô (V1)

Q

queue lae

quickly sema

R

raft i

rainbow pupuyu

rain u

rat kôa hanô

rattan sò

ray êhata (fish)

read -pase (V2)

reason ahô

red kôakôa

reflection awanô (of a person); ayaŋo (of an object)

refuse -le (V2)

religious mêtê

rest -lôwalo (V1)

return -kadi (V2)

rib apê alugu

rice padi

rid -sôa (V2) (get rid of)

right hêta (not wrong); wahê (opposite of left)

ripe aŋgu

ripen -pegu (V2)

riverbank katalehe (steep bank cut by a river)

road êsatô

roam -lake (V2)

roll -pêlêpê (V1)

roof sôlô; apolo (made of sago)

room lô

root awôwa

rope gu; têpê; lù (for stringing fish)

round kombo

row kata (of houses)

rubbish apapô; nôsôlô

rudder kêla

run -li (V1)

run away -yi (V1)

runt iyakêlê

S

sacred lapô

sago grub ki

sago àpề

sail ta; se (canvas sail); -ne (V2);

saliva ahôsulu

salt ulu

sandfly tataku

sand lidi

sarong upu

Saturday kolenalô

scales kalaka

school lồ

scoop -sulu (V1) (scoop up (fish, animal) with net or cloth)

scrape -no (V1) (coconut)

scratch -kalê (V2)

scrotum asisi

sea ulu

seafood mayê (from mangrove areas)

seagull kêmuhu (large); kanôla (small);

seahorse tamêŋgasu

search -êêlê (V1)

seaweed su

see -dumala (V1); -kona (V1)

seed ahalô

sell -salê (V2)

send -têkê (V2)

seven maipa salu; maipi anêndi salu

shadow awanô (of a person); ayaŋo (of an object)

shake -lindi (V1)

shallow ma (shallow place in the water)

shame maya

shark ênôpô

sharp amala

sharpen -ndi (V1)

she ini

shell ku (small shell like scallops); nene (half coconut shell used as cup); ni anaha (coconut); tidia (general term for bivalve shellfish); yala (variety found on mangrove trees)

shin hapo

shirt ako anêndi

show sô

shoot -hane (V2); -pê (V1) (long range with bow or gun); -puyu (V1) (with a spear at close range)

shoots aka (of plants)

short pane

shoulder pakia

shout -yôôhô (V1)

sickness miya

side apề anaŋa (edge)

sing -ŋe (V2)

singsing wè

sister-in-law alani (husband's brother's wife); hahêna (woman's brother's wife); wasôa hêna (man's brother's wife)

sister lasinala (younger sister of female); lasinalamatô (older sister of female); nôhôna (of male)

sit -ta (V1)

six maipa tômôlô; maipi anêndi tôgwâtô

sixty asamô sidi

skin anaso (of plants); nênê (of humans)

sky êkato

slap -taa (V2)

slit gong kôla

slow papia; piapia

small kege; nalô

smell -lumu (V1)

smoke atahu; tahu; yale (of fire)

snake ŋgu

sneeze asêpe

soft kapuma; pelee

sole haata

solution anêndi

some akô

son ai

sore nênêsese

soup asồlồ

sour asakê

spatula toa (for lime for chewing betelnut)

speak -pe

spear di; bole (pronged spear for fishing)

speedboat pinase

spider kawala

spirit la (ancestral spirit); mu (belonging to a particular clan)

spit -kusu (V1)

spoil -daa (V2)

sprout malaka

stairs ŋa

stand -tii (V1)

stare -sêgê (V1)

star taa

start -kalê (V2)

start -ya alôhô (INC)

stay -nda (V1)

steal -ya hono (INC)

step on -hô (V1)

stick -sapa (V2)

stink apalia

stomach alêta; lêta

stone hu

straight akatô; katô (not crooked)

strength ayaŋa

strike -ya (Virreg) (see section 4.1.4); -tôa (V1) (in anger)

string naŋaso (nylon)

stroke -samô (V2)

stubborn akaka

stump à apôane (of a tree)

sugar suka

sugar cane dì

sun a

Sunday sunda

surface anoso (of water)

swallow -taŋgo (V2)

swampy pelee

sweat o

sweep -samô (V2)

sweet akana

sweet potato pôa

sweetheart anatê

swim -di (V1)

swollen husê

T

table têô; tebo

tail asêkato; ayêpô (of a fish)

take -gwê (V2)

talk yà (N); -kô yà

tall watê

tapioca amika

taro ka

teach -tiha (V1)

tear -ka (V2)

tears malano

tell stories -ya mì (INC)

temple kiakwa

ten nômusu

testicles ahalô

thank you daŋge

that lênê (near addressee but not speaker); laê (near neither speaker nor addressee)

then tê

there tênê (near speaker, not addressee); taê (not near the speaker or the addressee)

they êsalu (3D); êsidi (3T); êsôha (3P); sôha (CONTR of êsôha (3P)); salu (CONTR of êsalu (3D)); sidi (CONTR of êsidi (3T));

thick aho (of round things); ambênê (of rectangular things)

thigh pôsôahô

thin atêkê

thing kề

this lene (near both speaker and addressee)

three sidi

throw -tani (V2)

thumb namapôô

thunder wowa

Thursday kolepesôha

tide mayapô (low tide); sisi (high tide)

tie -ŋi (V2)

time awanô (period); pepe (occasion)

tin ti

tip kato

toad sôkôla

tobacco tahu (grown in village)

toe hakaku; hapôô (big toe); hasôkê (little toe)

toenail hao

to kô

tongs kikia

tongue mandi

tooth nahe; nahe huku (front teeth); nahe katahô (back teeth)

top wahê

torch to; mandawa (electric)

touch -taa (V2)

trading hôgwa

trap se (for bandicoots)

tree kangaroo ôlô (small brown variety); pupu (white variety)

tree a

trevally êti

tribe kapôa

trousers ako tahô

true anêndi

Tuesday kolepesalu

tuna êyigu

turtle hana (large); miŋalô (small, speckled); wawi (small, fresh water)

twenty asamôni

twigs apana

twins tapôamiŋgi

two salu

tyre taiya

U

ulcer ŋgôa

uncle amala (father's younger brother or husband of mother's younger sister); amatô (father's older brother or husband of mother's older sister); awa mother's brother; father's sister's husband); wa (maternal uncle not the speaker's)

unripe malata

urinate -ndi (V2)

useful ŋêndi

V

vagina ôta

valuable ŋêndi

vein malamê

veranda pepele

village mêna

vomit -nu (V2)

W

wait -taya (V2)

wake up -pêtê

wallaby iyamôŋa

wall ahata; kataya

want lêtanahi

wantok tatôlamu

warm awahê

wash -sôma (V1)(something); -siapô (V2) (oneself)

waste nôsôlô

watermelon êtê pôpô

water pô

wave ya nama (INC)(hand)

waves maê

way êsa

we êmaha (1XP); ma(ha) (CONTR of êmaha (1XP)); êmalu (1XD); ma(lu) (CONTR of êmalu (1XD); êmidi (1XT); êsidi (1IT); a (CONTR 1IP); aha (1IP); alu (1ID);

weather kôma

weave -hi (V1)

Wednesday kolepesidi

weeds wahê

week sunda

weep -lalaŋi (V1)

wet atôtôhô

whale gasugasu

what sani; sa

when hêtape (past); nêtape (non-past)

where epe

which epe; sa(ni)

white pisi

white man pôpô̲

who ase

whole samô

widow hêna madi

widower amêna lô

win -kêlêlê (V1)

wind kôma; mula (north-east)

window tawala nalô

wing pakê

wipe -môa (V2)

with kô (instrumental)

woman hêna

wood à

work kole (N); -kô (V1)

worthless alôma

wrist namakôsô

write -hô (V2)

wrong so (something wrong)

yam ami; pôpô

year yala

yellow kahini; yaya

yes kê

yesterday ndêlene

you yê (1S); môdi (CONTR of yêmôdi (2T)); môha (CONTR of yêmôha (2P)); môlu (CONTR of yêmôlu (2D)); yêmôha (2P); yêmudi (2T); yêmulu (2D)

PLACE NAMES IN LABU

dusuku	Labubutu
êhalo	Labumeti
gamahu	entrance to Labu lakes
hapa	the Labu people's name for themselves
kakala	Labutali
kutu	the ox-bow lake
lupu	the new settlement near Markham bridge
pisahô	bank at the mouth of the Markham River on the Labubutu side
pisì	Markham River
piso	Busu River
tôhi	bank of the Markham River on the Lae side
walêmu	Lae
yapê	Yabem

VOCABULARY DIFFERENCES BETWEEN VILLAGES

Labubutu	Labutali and Labumeti	gloss
ahôŋgu	ahiŋgi	*mouth*
akapô	hakapô	*leg*
alugu	aligi	*bone*
bo	ba	*ball*
nalô	ŋalô	*small*
pegu	pegi	*ripe*

ABBREVIATIONS

>	derived from
1	first person
2	second person
3	third person
Adv	adverb
Asp	aspect marker
C	consonant
COMP	completive aspect
CONJ	conjunction
CONTR	contraction
CTF	conterfactual prefix
D	dual
DUB	dubitative modal
DUR	durative aspect
E	English
FUT	future modal
I	inclusive
INC	incorporated adjunct in phrasal verb
INTJ	interjection
intrans	intransitive
IR	nonpast irrealis
M	modifier
MOD	modal
MQual	qualitative modifier
MQuan	quantitative modifier
N	noun
NEG	negative marker
NP	noun phrase
NR	nonpast realis
P	plural
PNP	possessive noun phrase
POC	Proto-Oceanic
POS	genitive possessive marker
POSN	nominal possessive marker
POT	potential modal
PP	prepositional phrase
PRED	predicate
Prep	preposition
PRO	pronoun
PT	past tense
Q	noun qualifier
Qdem	demonstrative
Qlim	limiter
R	resultative
REL	relativiser
S	singular
STM	subject/tense/modality prefix
SUB	subordinator
T	trial
TN	temporal noun
TP	temporal phrase
trans	transitive
V	vowel
Vb	verb
Vb'	secondary verb
Virreg	irregular verb
V1	verb class 1
V2	verb class 2
VP	verb phrase
VP'	secondary verb phrase
X	exclusive

BIBLIOGRAPHY

BAMGBOṢE, Ayo

1974 On serial verbs and verbal status. *Journal of West African Languages* 9:17-48.

BRADSHAW, Joel

1978 Notes on subgrouping in the Huon Gulf area. *University of Hawaii Working Papers in Linguistics* 10/1:49-83.

BRADSHAW, Joel

1979 Obstruent harmony and tonogenesis in Jabêm. *Lingua* 49, 2/3: 189-205.

1980 Dempwolff's description of verb serialization in Yabem. *University of Hawaii Working Papers in Linguistics* 12/3:1-26. (A later version in Amran Halim, Lois Carrington and S.A. Wurm, eds *Papers from the Third International Conference on Austronesian Linguistics* vol.4: 177-198, 1983.

1982 Word order change in Papua New Guinea Austronesian languages. Ph.D dissertation, University of Hawaii.

CAPELL, A.

1949 Two tonal languages of New Guinea. *Bulletin of the School of Oriental Studies* 13:184-189.

1962 *A linguistic survey of the south-western Pacific.* New and revised edition. Noumea: South Pacific Commission Technical Paper No. 136.

CLARK, Marybeth

1978 *Coverbs and case in Vietnamese. PL,* B-48.

1979a Coverbs: evidence for the derivation of prepositions from verbs: new evidence from Hmong. *University of Hawaii Working Papers in Linguistics* 11/2:1-12.

1979b Synchronically derived prepositions in diachronic perspective: some evidence from Hmong. Paper presented at the 12th International Conference on Sino-Tibetan Languages and Linguistics, Paris.

COMRIE, Bernard

1981 *Language universals and linguistic typology.* Oxford: Basil Blackwell.

DEMPWOLFF, Otto

1930 *Grammatik der Jabêm-Sprache auf Neuguinea.* Abhandlungen aus dem Gebiet der Auslandskunde, vol. 50. Hamburg: Friederichsen, De Gruyter.

FISCHER, H.

1966 Wampet, Mumeng, und Labu: Drei kurze Worterlisten. *Anthropos* 61: 878-883.

FOLEY, William A. and Mike OLSON

forth-coming Clausehood and verb serialization. To appear in Johanna Nichols and Anthony Woodbury, eds *Grammar inside and outside the clause.*

GEORGE, Issac

1976 Verb serialization and lexical decomposition. *Studies in African Linguistics,* Supplement 6:63-72.

GIVÓN, Talmy

1975 Serial verbs and syntactic change: Niger-Congo. In Charles N. Li, ed. *Word order and word order change,* 47-112. Austin: University of Texas Press.

HOOLEY, Bruce A.

1971 Austronesian languages of the Morobe District, Papua New Guinea. *Oceanic Linguistics* 10/2:79-151.

1976 Austronesian languages, Morobe Province. In S.A. Wurm, ed. *New Guinea area languages and language study*, vol.2: *Austronesian languages*, 335-348. *PL*, C-39.

HOOLEY, B.A. and K.A. McELHANON

1970 The languages of the Morobe District, New Guinea. In S.A. Wurm and D.C. Laycock, eds *Pacific linguistic studies in honour of Arthur Capell*, 1065-1094. *PL*, C-13.

JOHNSTON, Raymond L.

1978 Serial verbs and the expression of concepts of location and motion in Nakanai. In S.A. Wurm and Lois Carrington, eds *Second International Conference on Austronesian Linguistics: proceedings*, 1043-1094. *PL*, C-61.

LADEFOGED, Peter

1975 *A course in phonetics*. New York: Harcourt, Brace, Jovanovich.

LANG, Adrianne

1975 *The semantics of classificatory verbs in Enga (and other Papua New Guinea languages)*. *PL*, B-39.

LI, Charles N. and Sandra A. THOMPSON

1974 Co-verbs in Mandarin Chinese: verbs or prepositions. *Journal of Chinese Linguistics* 2/3:257-278.

LORD, Carol

1973 Serial verbs in transition. *Studies in African Linguistics* 4:269-296.

McELHANON, K.A.

1978 *Classification of the languages of the Morobe Province, Papua New Guinea, with the linguistic situation of individual villages*. Canberra: Department of Linguistics, Research School of Pacific Studies, A.N.U.

ROSS, Malcolm

1979 Vanimo phonology: sketch and speculation. Paper for the 13th Congress of the Linguistic Society of Papua New Guinea, Port Moresby.

SALZNER, R.

1960 *Sprachenatlas des Indopazifischen Raumes*, 2 vols. Wiesbaden: Otto Harrassowitz.

SCHMITZ, C.

1960 *Historische Probleme in Nordost-Neuguinea, Huon Halbinsel*. Wiesbaden: F. Steiner.

A MUSSAU VOCABULARY, WITH PHONOLOGICAL NOTES

Robert Blust

0. INTRODUCTION AND AIMS

According to Beaumont (1976) there are nineteen Austronesian (AN) languages spoken in the New Ireland Province of Papua New Guinea. While most of these are found on New Ireland itself, a substantial minority are spoken on outlying islands. The most northerly of these is the language of the St. Matthias Archipelago, separated by the 50-mile wide Ysabel Channel from New Hanover to the south, and by 100 miles of open sea from the Admiralty Islands to the south-west.

The St. Matthias group consists of Mussau (or Musau), some 110 square miles in extent, Emira (Emir, E Mira), about 18 square miles in extent, and a number of smaller islands including Tenis (or Tench), 40 miles due east of Emira and 60 miles from the nearest landfall in New Ireland.[1] Population according to the 1970-71 census figures is Mussau 3,153, Emira 498, Tenis 49 (Beaumont 1972:13).

Although there appear to be some dialect differences on Mussau itself, the available evidence suggests that a single language is spoken throughout the St. Matthias Archipelago. The most extensive publication on this language to date is an English-Emira (E Mira) vocabulary of about 500 words collected by Chinnery (1927). Lithgow and Claassen (1968) offer a few passing observations on the phonetic typology of Mussau (Musau), Emira and Tenis. Based on a comparison of equivalents for the first 120 meanings of a standard S.I.L. test list they also report 92% shared cognates between Mussau and Emira. Capell (1971:261ff) states that a Mussau (Musau) wordlist and sentences were supplied to him in 1945, and that he himself took some fieldnotes in 1952 on Emira (E Mira). He lists the Emira pronouns (singular, dual, trial, plural) together with three sentences, and a few possessive forms from Mussau. Beaumont (1972:29), who provides the most extensive review of the linguistic literature on New Ireland currently available, calls attention to an unpublished Mussau-English and English-Mussau wordlist which "was probably written by Pastor A.S. Atkins who was pioneer missionary for the Seventh Day Adventist Mission from 1934-1942. Each section of the wordlist has about 600 words". There are no phonological data in Chinnery nor, reportedly, in this manuscript. Finally, Beaumont (1976), basing himself on the first 105 items of the S.I.L. comparative vocabulary used by Lithgow and Claassen, gives a cognate score of 66% for Tenis with Mussau-Emira, which he treats as a single language (called 'Emira-Musau'). Based on cognate percentages with other languages of the New Ireland Province he assigns Emira, Mussau and

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Tenis to a distinct St. Matthias subgroup. Nine Mussau-Emira and six Tenis words are given on a comparative vocabulary of New Ireland languages, and all six cases of overlap appear to be cognate.[2]

The following vocabulary of approximately 570 words was collected as an incidental by-product of fieldwork conducted in the Admiralty Islands from February to May, 1975. Several Mussau speakers were located near Lorengau, Manus, and two elicitation sessions were arranged totalling about six contact hours. All elicitation was through the medium of New Guinea Pidgin English. The principal informant was Uloulo Ainamangas, a native of Lomakunauru village on southern Mussau who was born around 1930 and had served for several years as a Seventh Day Adventist missionary stationed in Manus. I was told that the speech of central and northern Mussau villages differs in some particulars from that of Lomakunauru.

My major aims in this paper are: 1. to extend the published lexical record for Mussau-Emira beyond the beginning made by Chinnery in 1927, and 2. to provide a first statement of both the synchronic and the diachronic phonology, which until now has been all but totally neglected. In addition to these aims I offer a few very limited remarks on grammar.

1. GRAMMAR

The discussion of grammar will be divided into 1. subsystems (numerals, pronouns) and 2. morphology and syntax.

1.1 Subsystems

The Mussau system of numeration can be outlined as follows. Numerals 16 - 19 were not recorded, but are inferred on the basis of the system apparent in the forms actually transcribed:

1	sesa	17	(ka-sa-ŋaulu-ga-itu)
2	lua	18	(ka-sa-ŋaulu-ga-ualu)
3	tolu	19	(ka-sa-ŋaulu-ga-sio)
4	ata	20	ga-lue-ŋaulu
5	lima	30	ko-tolu-ŋaulu
6	nomo	40	ga-ati-ŋaulu
7	itu	50	ga-lima-ŋaulu
8	ualu	60	ga-onomo-ŋaulu
9	sio	70	ga-itu-ŋaulu
10	sa-ŋaulu	80	ga-ualu-ŋaulu
11	ka-sa-ŋaulu-ka-teba	90	ga-sio-ŋaulu
12	ka-sa-ŋaulu-ga-lua	100	ai-e-teba
13	ka-sa-ŋaulu-ko-tolu	200	ai-e-lua
14	ka-sa-ŋaulu-ga-ata	1000	airari-e-teba or ka-teba-airari[3]
15	ka-sa-ŋaulu-ga-lima	2000	airari-e-lua or ga-lua-airari
16	(ka-sa-ŋaulu-ga-onomo)	3000	airari-e-tolu or ko-tolu-airari

As can be seen, Mussau has an unmixed decimal system of counting. Moreover, the numerals 2 - 10 clearly reflect the corresponding Proto-Oceanic (POC) forms. The most significant synchronic problems in analysing this system are: 1. the suppletive alternation of sesa and teba in the meaning *one*, 2. the phonological alternation of lua (2, 12, 200, 2000) with lue (20), 3. the phonological

alternation of ata (4, 14) with ati (40), 4. the phonological alternation of nomo (6) with onomo (60), 5. the phonological alternation of ka, ga and ko, 6. the seemingly redundant presence of this preposed element in numerals above *ten*.

If the limited material permits any definite conclusions, sesa is perhaps restricted to serial counting (cf. la-ŋa-teba *one day*, bo-ŋa-teba *one night*, koko a-teba *one fish*). In the preceding contexts the function of teba seems to border on that of an article. This is further suggested by the recorded contrast ane-gi niu *my coconut*: ane-gi niu e-teba *I have a/one coconut*. One might therefore expect ale-gi e-teba to mean *I have a/one house* (ale), but this string was actually given to me in the meaning *my house*. Moreover, kina-gi e-teba *my mother* (kina) could hardly have a clausal interpretation. It thus appears likely that one form of possessive marking derives from an earlier clausal construction in which the numeral/article has (at least in non-contrastive contexts) become semantically vacuous.[4] No reason can be given for the alternation of lua with lue, but explanations for the other anomalies will be suggested below.

Before considering the pronouns it should be noted that Chinnery's material on the Emira numerals differs from mine in the following respects: 1. the word for *one* is unrelated (latin-ng ai ia), 2. lua is the only stem form for *two*, (cf. galua *two*, ga luang au ulu *twenty*), 3. ati is the only stem form for *four* (gati *four*, ga ting au ulu *forty*, 4. onomo (written unomo) is the only stem form for *six* (gaunomo *six*, gau nomong au ul *sixty*), 5. ga does not alternate with ka or ko (ga luang au ulu *twenty*, gato lung au ulu *thirty*), 6. ga appears on all numerals above *one* (galua, gatolu, gati, galima, etc.).

Mussau has three sets of pronouns of which the first two are partially similar. These are labelled A, B and C below. With one exception, only the singular forms were recorded for the third set.

		Set A	Set B	Set C
sg.				
1		agi	-gi/gu	a-
2		io	-m	u-
3		ia	-na	e-
dual				
1	(incl.)	ita lua	ita lua	
	(exl.)	ami lua	ami lua	
2		aŋa lua	aŋa lua	
3		ila lua	ira rua	la-lu
plural				
1	(incl.)	ita	ita	
	(excl.)	ami	mami	
2		aŋa	aŋa	
3		ila	ira	

Set A consists of independent subject pronouns, Set B of object and possessive pronouns and Set C of proclitic subject markers in the verb complex (see below). A single trial form was recorded (aŋa tolu), and it therefore seems likely that a trial/paucal number is morphologically distinguished in Mussau, as it is in Emira. Collective plurals ita akapa *all of us* and ila akapa *all of them* were also recorded.

Capell's (1971) data indicate two types of possessive construction in Mussau, the first marked by a postclitic pronoun (tama-gi *my father*) and the second by a preposed complex of relation marker (RM) plus clitic pronoun: kalu-ku niu *my coconut* (as mere possession), ane-gi niu *my coconut (to eat)*, oi-gu niu *my coconut (to drink)*. This type of distinction is, of course, widely attested in Oceanic languages. As indicated in the vocabulary, virtually all body part names and kinship terms as well as some non-material extensions of the self ('shadow/soul', 'name') were recorded with obligatory possessive suffixes. Unlike the situation in many Oceanic languages, however, some nouns which are not obligatorily possessed evidently take the same suffix, as in ale-gi e-teba *my house* (cf. e.g. nima-gi *my hand*, kina-gi e-teba *my mother*). Apart from ane-gi inana *my food* and ane-gi koko *my fish (to eat)*, I recorded little further information on the preposed relation markers. The possibility that Mussau has some relation markers other than those listed by Capell is suggested, however, by une-gi pen(i) *my pen*.

1.2 Morphology and syntax

I collected only 23 isolated sentences, three intransitive verb paradigms (eat, sleep, laugh) in the singular, and one relatively complete transitive verb paradigm (look). These are given in full below:

(1) sei e-nama-la ane-gi koko a-teba
who he-eat RM-*my fish a/one*
who ate my fish?

(2) u-nama-la saa
you-eat what
what did you eat?

(3) polii-saa John e-nama-la ane-gi koko a-teba
why he eat RM- *my fish a/one*
why did John eat my fish?

(4) a-nama-ie-la polii a-maamalo
I-eat because I-hungry
I ate it because I was hungry.

(5) elobi-saa u-gaa-la koko a-teba
time- what you-catch fish a/one
when did you catch the fish?[5]

(6) ea u-gaa-la koko a-teba
where you-catch fish a/one
where did you catch the fish?

(7) u-gaa-la koko tale-saa
you-catch fish how
how did you catch the fish?

(8) u-gaa-la ga-isa koko
you-catch how many fish
how many fish did you catch?

(9) koko e-kaakaa-i tale keru
fish it-stay-at inside basket
the fish is inside the basket

(10) une-gi pen(i) atiulu toko/too/teke
RM- *my pen this/that/that*
this/that is my pen

(11) gai-a uru-ŋ-ai me u-laa sulu-i
fetch-it paper and you-go burn-it
take the paper and burn it!

(12) poso-a-la ta-nima-m
hold in-hand-your
hold it in your hand!

(13) pasi pate-a-la
cut break
go cut it!

(14) porapora nima-m
wash hand-your
wash your hands!

(15) bibi aogi e-la
push back
push it back!

(16) ŋusu poi e-la
smell odor
smell it!

(17) e-asai inoa-na
he-pull breath-his
he is breathing

(18) ila lokuloku
they dance
they are dancing

(19) agi a-tuutuu
I I-cook
I'm cooking

(20) agi a-uŋu
I I-work
I'm working

(21) ane-gi niu e-teba
RM- *my coconut a/one*
I have a/one coconut (to eat); my coconut

(22) agi a-ropi manu
I I-drink water
I'm drinking water

(23) sei arari-m
who name-your
what is your name?

(24) a. agi a-namanama *I'm eating*
b. io u-namanama *you're eating*
c. ia e-namanama *he's/she's eating*

(25) a. agi a-asekanue *I'm sleeping*
b. io u-asekanue *you're sleeping*
c. ia e-asekanue *he's/she's sleeping*

(26) a. agi a-kaŋakaŋa *I'm laughing*
b. io u-kaŋakaŋa *you're laughing*
c. ia e-kaŋakaŋa *he's/she's laughing*

(27) a. agi a-tara-la eta-na or agi a-tara ie-la
I'm looking at him/her
b. io u-tara-la eta-gi or io u-tara-ie-gi-la
you are looking at me
c. ia e-tara-la eta-m or ia e-tara io-la
he is looking at you
d. ia e-tara-la eta-ita or ia e-tara ita-la
he is looking at us (incl.)
e. ia e-tara-la eta-mami or ia e-tara mami-la
he is looking at us (excl.)
f. ia e-tara-la eta-aŋa or ia e-tara aŋa-la
he is looking at you (pl.)
g. ia e-tara-la eta-ira or ia e-tara ira-la
he is looking at them
h. ila-lua la-lu tara-la eta-gi
they (dual) *are looking at me*
i. ita tara-la eta-na
we (incl.) *are looking at him/her*
j. ami tara-la eta-na
we (excl.) *are looking at him/her*

In addition to the above the following complex noun phrases should be noted: ateio talia (= *fresh water* + *round*) *lake*, manu kulalaba (= *water* + *big*) *high tide*, kapu-gu bause (= *elder sibling* + *my* + *female*) *my older sister*, tubu-gu bause pisike (= *lineal consanguine two generations removed* + *my* + *female* + *small*) *my grand-daughter*, patu nima (= *joint* + *arm*) *elbow*, uu gila (= *feather* + *bird*) *feather*, biliki niu (= *skin*, *integument* + *coconut*) *coconut husk*, biliki-ŋ-ai (= *skin*, *integument* + *tree*) *tree bark*, riu-ŋ-aasoŋo (= *bone* + *of* + *rafter*) *rib*, uru-ŋ-ai (= *leaf* + *of* + *tree*) *leaf; paper*, rarum-i-koko (= *water* + *of* + *fish*), *fish broth*, pakasa *handle*, pakasi kaputu (= *handle* + i + *adze*) *adze handle*.

Based on the foregoing extremely limited data the following tentative conclusions about Mussau sentence structure can be advanced:

1) the order of major sentence constituents is SVO
2) this order is internally mirrored in the verb complex. The verb complex is a single phonological word which consists minimally of two elements: 1. a proclitic subject marker which varies for person and number, and 2. the verb stem. Various suffixes or postclitics may follow a transitive verb stem, but too little material was collected to determine their functions with certainty (see below).
3) locative relations are indicated by prepositions

4) the structure of attributive constructions is head (+ possessor) + attribute. Genitive constructions follow the order part + whole.

As in human languages generally, the shortest morphemes in Mussau often present the biggest problems in analysis. A brief inventory of minor morphemes identified, and their possible functions follows:

/a/- (ligature?). The /a/ that appears in e.g. koko a-teba *a/one fish* looks rather like a numeral ligature, but this cannot yet be determined with confidence. Moreover, the relationship of this /a/ to the /e/ of e.g. ale-gi e-teba *my house* remains unclear.

-/a/ (transitive). An unambiguous suffix -/a/ was recorded in a few verbs, where it appears to mark transitivity. The clearest example is seen in the contrast between kasu mai *come here* (vocative) and kasu-a mai *to bring (something)*.

-(V)na (attributive). An attributive suffix containing the common element -na is common in Mussau adjectives. In some cases this seems clearly to have the phonological shape -ana, as in raerae-ana *red* (cf. rae *blood*) and usouso-ana *white*. In other cases the shape appears to be -ena, as in riuriu-ena *skinny thin* (cf. riu *bone*) and boboŋi-ena *black*. In still other cases the suffix is -na, as in masoso or masoso-na *ripe, cooked*, kalakalaŋi-na *near*, malaŋo-na *dry*, ou-na *new*. Lastly, some adjectives have no suffix, as aanasa *hot*, makariŋe *cold*, namuu *big*, pisike *small*, sesa *bad*, onose *sweet* and masau *far*. The distribution of -(V)na allomorphs is phonologically unpredictable, and so is mentioned here. Other problems with this suffix which may be amenable to a phonological solution are discussed under 'morphophonemics'.

/e/ (predicative?). This is perhaps the single most problematic morpheme recorded in the entire corpus. It appears before the citation forms of many (though not all) verbs, as in e asoaso poi *to dream*, e bukabukala *to float*, e (ma)matautu *to fear, be afraid* and e porapora *to wash* (but cf. asaasa *to swim*, kanusu *to spit*, ropi *to drink*). In this position it resembles the marker of indefinite predication reported for Fijian, Samoan, Rennellese and some other Oceanic languages. Its absence with many verbs, however, is puzzling — though this may simply reflect the optional character of the particle in conjunction with the limited size of the corpus. In some other respects /e/ resembles a pronoun, much like the similar particle in Motu, Gilbertese, Marshallese and Ponapean, and it is possible that it will ultimately prove to be identical to the third person singular Set C proclitic.[6] In addition /e/ is found cliticised to /la/ in several imperative sentences, and occurs in such directional expressions as e lamana *toward the sea* and e lae *toward the interior*. As already noted, the /e/ in ale-gi e-teba *my house* or ai-e-teba *one hundred* resembles a ligature. Finally, /e/ appears to be lexicalised in some words and expressions, as in e lo marase *sky* (PRED-in-middle), e lo alai *good afternoon* and possibly elobi-saa (= e lo bi saa?) *when?*

/eta/ (preposition?). A preposition-like element /eta/ was recorded in sentences 27a - j, where it is phonologically bound to the following object pronoun. It is possible that this phonological sequence consists of /e/ plus /ta/, and that the second morpheme is identical to the prenominal particle in poso-a-la ta-nima-m *hold it in your hand!*

/i/ (genitive). A genitive marker /i/ was recorded in rarum i koko *fish broth*. A second example can be isolated by comparison of pakasi kaputu *handle of an adze* with pakasa *handle* (in general), and a third example may be lexicalised in tukuilapu *rainbow* (cf. lapu *kind of colorful lizard*). An apparently more productive genitive marker is /ŋ/ (see below).

/i/ (locative?). A single example of a possible locative marker /i/ was recorded in the sentence koko e-kaakaa-i tale keru *the fish is inside the basket*.

-/ie/. As noted already, the postverbal clitic complex -e-la occurs in several imperative sentences in the corpus. In one known case, however, the sequence -i-e-la is postposed to the verb stem: soa-i-e-la *shoot/stab him/it!* (cf. soasoa-la idem). Moreover, as seen in soasoa-la, such variant pairs as katuu/katuu-la *to fall* and the first variant of sentences 27a - j, /la/ sometimes is postposed directly to the verb stem. Given these facts the morphological analysis of some verbs that were transcribed only in complex form is ambiguous: e.g. [ŋúsu poyɛ́la] *smell it!* = /ŋusu poie la/, /ŋusu poi e la/ or /ŋusu po i e la/? In general I have chosen the pattern that appears to be most common for unambiguous forms as a basis for the analysis of ambiguous forms. Thus in the present case I write /poi e la/, since -e-la is the most frequent postverbal clitic complex in my data. Given the overall pattern it seems likely that sentence 27b u-tara-ie-gi-la is an error for u-tara-gi-la. If so, there are grounds for regarding -ie as an allomorph of the third person singular Set A pronoun /ia/, and for regarding Set A forms as not exclusively subject pronouns.

-/la/. This element is closely associated with postverbal /e/, and is almost equally difficult to characterise given the limitations of the data. In sentences 27a - j, it might be considered a generalised (invariant) object marker which is postposed either to the verb or to the object pronoun. However, the citation form of *to see, look at* was recorded as tarala, and /la/ occurs in such intransitive constructions as /e mate la/ *he is dead*. The preverbal /la/ of /la pasa asi/ *plant the taro!* appears to be distinct, though this is by no means certain. Finally, as will be mentioned presently, the main verb laa *to go, walk* is sometimes used as a verbal auxiliary to indicate motion away from the speaker, as in kasu-a laa *to take*. In [biβi aogi ɛla] *push it back!* the informant suggested that [ɛla] = *go*. If so it is possible that [ɛla] is /e laa/, and that these constructions thus parallel (or are calqued on?) Pidgin verbs of motion with i go (e.g. siubim i go *push*). However, since the last vowel of -e-la was consistently recorded as short, the informant's remark may have been nothing more than a forced attempt to find Mussau translation equivalents of the Pidgin elicitation forms.

/laa/, /mai/ (directional). These two verbal auxiliaries were recorded in only a few forms, but their significance is unambiguous in kasu-a mai *to bring*, kasu-a laa *to take*. It is noteworthy that laa can also be used as a main verb with the verbal auxiliary mai, which then contrasts with tau: laa mai *to bring*, laa tau *to take*.

-/ni/. This morpheme was recorded only in bause-ni *wife* (cf. bause *female, woman*) and taita-ni *husband* (cf. taita *male, man*).

/ŋ/ (genitive). In view of the limited quantity of data collected /ŋ/ appears to be a highly productive genitive marker. It was recorded as a functional morpheme in eight compounds with ai *tree* (biliki-ŋ-ai *bark of a tree*, laa-ŋ-ai *branch of a tree*, liue-ŋ-ai *base of a tree*, etc.), as well as in several compounds with nei *odor* (nei-ŋ-asi *odor of taro* nei-ŋ-ulu *odor of breadfruit*, etc.). In addition, several genitive compounds have been lexicalised, as in riu-ŋ-aasoŋo *rib* (lit. *bone of rafter*), uru-ŋ-uita *heart* (lit. *head of octopus*) and possibly ai pake ŋ-ale *roof* (lit. *covering-thing of house?*). /ŋ/ is realised as a velar nasal only before vowel-initial nouns. Before consonant-initial nouns it is realised as zero: biliki niu *coconut husk*, patu nima *elbow*, ui mosu *tail of a pig*. Given this complementation some genitive

compounds in which the second noun was not recorded in isolation are morphologically ambiguous: [taliŋa ŋiŋiy] *kind of mushroom* = /taliŋa ŋ iŋii/ or /taliŋa ŋiŋii/? In a few other cases a proposed lexical entry may be a genitive compound, as with kalaŋisi *sandfly* and patuŋanua *anchor*. The relationship between /ŋ/ and /i/ remains unclear.[7]

/ŋa/ (ligature?). Historically the initial CV of ŋaulu *group of ten* derives from a numeral ligature which may or may not persist as a separate morpheme in contemporary Mussau. A similar element is found in [laŋatɛβa] *a/one day* and [boŋatɛβa] *a/one night*. Since the Mussau words for *day* and *night* almost certainly derive from prototypes *daŋi, *boŋi it is tempting to regard these collocations as /laŋ a teba/, /boŋ a teba/, thus confirming the apparent ligature noted in /koko a teba/ *a/one fish*. The principal difficulty with this proposal is that the unquantified bases were recorded as [la] *light* and [bo] *night*, thereby supporting a phonemic analysis /la ŋa teba/, /bo ŋa teba/. The homophonous postnominal element in tuu laalaa-ŋa-na *fork of its branch* (cf. laa *branch*) appears to be distinct.

/pa/-. At some level of analysis it seems certain that paluaalua *twin* is to be related to lua *two*, but no parallels to the morphology of this form were observed.

/teba/ (article?). As noted already, teba resembles an article in some contexts, though in other contexts this interpretation is difficult. It is unclear why it was recorded in sentences (1), (3), (5) and (6) but not in sentences (7), (8) or (9).

/toa/ (collective). A collective particle toa was recorded in alikietoa *children* (cf. natu *child, offspring*), namuu atoa *adults* (cf. namuu *big, wide; old, of people*) and tuŋatoa *all*. The phonemic analysis of these three items appears therefore to be /aliki e toa/, /namuu ŋa toa/, /tu ŋa toa/. Such an analysis strengthens the argument for a ligature /ŋa/, and raises further questions about the range of functions of /e/. It is possible that the last element of /aluse taumata tu/ *tall person* is to be identified with the first element of /tu ŋa toa/.

In addition to the foregoing minor morphemes which can be isolated on the basis of contrast within the present grammatical system of Mussau, two affixes which may or may not be productive can be isolated through comparison with other Austronesian languages.

/ai/- (collective or reciprocal action). Several recorded polysyllabic verbs appear to contain a reflex of POC *paRi- *prefix of collective or reciprocal action*. The most convincing candidates are aiobi *to fight, as in war*, aiora *to copulate* and perhaps aitoka *to collect, gather*. This affix may still be functional in Mussau, but the available data are insufficient to determine the point.

/ma/- (attributive). Many Mussau adjectives — both those recorded with the attributive suffix -(V)na and those recorded without it — are polysyllables that begin with ma-: malaŋona *dry*, mamaatana *heavy*, masikana *sweet*, malalake *thin, of materials*, maroate *wet*, masau *far*, etc. Two words of this type were recorded with an optional additional sequence ma-: (ma)matautu *to fear, be afraid*, (ma)maulue *living, alive*. It is not known whether this extension is 1) a historically secondary layer of identical morphology or 2) a product of partial reduplication. If 1) these two items can be taken as evidence that /ma/- is still functional in Mussau. In view of the fact that ma- and -(V)na can co-occur in the same base, however, it seems more likely that ma- is moribund, if not defunct.

Reduplication. A substantial number of the word bases in my corpus are reduplicated. In some cases reduplication appears to be little more than an arbitrary feature of the lexical item with no semantic content, as with areare susu *nipple of the breast*, batibati *spider* or guluguluena *straight, correct, true*. With non-stative verbs, however, reduplication probably has some grammatical functions. The available material does not permit us to state these with complete confidence, but a correlation of non-reduplicated verb stem with purposive or goal-directed action on the one hand, and of reduplicated verb stem with non-purposive or non-goal-directed action on the other seems likely. This perhaps appears most clearly in kasu mai *come here!*, kasu-a mai *to bring*, kasu-a laa *to take* next to kasukasu *to walk*, kuu-e-la *blow on it!* next to kuukuu *to blow, of the wind* and perhaps suu sio *to dive down* next to suusuu *to bathe*. In general this correlation can be stated in terms of transitivity, since purposive action is most commonly transitive and non-purposive action most commonly intransitive. Contrasts such as suu sio vs. suusuu and u-nama-la saa *what did you eat?* vs. ia e-namanama bua *he is chewing betel* suggest nonetheless that the basis for the distinction is not transitivity as such, but some other feature closely associated with it. Some exceptions to the foregoing pattern appear to exist, as with porapora mata-m *wash your face!* (where, however, a non-reduplicated base was not recorded) and soasoa-la *stab him/it!*. Finally, several words of three identical syllables were noted, as with mamama *to yawn* and mumumu *to suck*. These appear to be invariant.

Subject pronoun deletion. Subject pronouns were recorded almost entirely within grammatical paradigms. In sentences that were not collected with a view to paradigmatic contrast the subject pronoun was normally omitted, much as in Romance, where person is marked redundantly by verbal inflection.[9]

Order of question words. As can be seen in sentences (1) - (8), the interrogatives 'who?', 'why?', 'when?' and 'where?' are preverbal, while the interrogatives 'what?', 'how?' and 'how many?' are postverbal. The latter two, however, differ in that 'how many?' precedes the object, whereas 'how?' follows it. The data are insufficient to determine whether these observational differences reflect underlying syntactic differences, or merely the random recording of variable orders common to all of these words.

2. SYNCHRONIC PHONOLOGY

The discussion of synchronic phonology will be divided into 1. phoneme inventory, 2. phonotactic constraints, 3. morphophonemics and 4. phonetics.

2.1 Phoneme inventory

Mussau makes contrastive use of eleven consonants and five vowels, as follows:

Consonants		
p	t	k
b		g
m	n	ŋ
	s	
	l	
	r	

Vowels	
i	u
e	o
a	

(plus length)

In addition to the above I transcribed two phones which might be called "phantom laryngeals". Lithgow and Claassen (1968:7) noted as a general phonetic feature of Emira-Musau a "fluctuating ... h preceding word-initial vowels". I did not observe this feature, but instead transcribed [h] in *final* position once in [ágih] *I* (which was otherwise recorded many times with a final vowel), and in [gágah] *manta ray*, which was recorded only once. Similarly, I transcribed an optional weak glottal stop following underlying final vowels in a number of words.

Neither of these phones is phonemic. They will be discussed further under *phonetics* (2.4).

2.2 Phonotactic constraints

Although trisyllables are quite common and quadrisyllables not unusual, a preliminary check of non-reduplicated bases in Mussau suggests that the canonical shape with greatest frequency is CVCV.

There appear to be no limitations on the distribution of vowels, which occur in geminate clusters (aanasa *warm, hot* biiso *foam, froth, bubbles*) and in heterorganic clusters of up to four members (uaiata *large brown rock cod*). Final u, however, is rare after m, having been recorded only in mumumu *to suck*.[9]

There is one known limitation on the distribution of consonants: /l/ and /r/ may not co-occur within the same morpheme. That this constraint is not due to accidental gaps in the data is clear from the historical phonology, where the non-permitted sequences invariably assimilated to /r/ ... /r/. Moreover, as seen earlier, a puzzling feature of the recorded third person plural pronoun is the occurrence of Set A ila, but Set B ira. The full significance of this observation is impossible to appreciate with the data to hand, but it is striking that in the dual number the liquid of the dual marker co-varies with that of the pronoun: ila lua *they* (dual), but ira rua *them* (dual).

The major question in Mussau phonotactics is whether underlying final consonants and consonant clusters should be recognised. Final consonants were recorded in fourteen morphemes, as follows: 1. abum, 2. aum, 3. bagalaim, 4. batum, 5. gomgom, 6. kulum, 7. -m, 8. malumlum, 9. patioŋ, 10. pen(i), 11. rarum, 12. raum, 13. saurorom, 14. taon. In addition a heterorganic consonant cluster was recorded in items 5 and 8 above, and in tumtumŋana *dull, blunt*. As can be seen, the range of consonants that is permitted pre-consonantally or before word-boundary in Mussau is severely restricted. If we exclude the recent English loanword pen(i), which has an optional pronunciation with final vowel, only /m/ was recorded in these environments except in items 9 and 14. However [patiyóŋ] was transcribed with an irregular final stress which indicates that an underlying final vowel of undetermined quality has been deleted by a low-level allophonic rule. Similarly, Nevermann (1933:98) gives taono as the name of a fruit tree. If connected, this suggests that [taon] is a free variant of [taóno]. These two words are thus perhaps best regarded (despite the stress in [táon] as containing an underlying final vowel. As will be seen below (*phonetics*, 2.4), final vowels are commonly devoiced in Mussau. In a number of words both Chinnery and Nevermann write a final consonant where I recorded an optionally voiceless vowel: Chinnery talinga bulong (boloŋo) *deaf*, kalangis (kalaŋisi) *sandfly*, Nevermann sinak (sinaka) *sun*. We must, therefore, ask whether preconsonantal and final /m/ is a feature of Mussau morpheme structure, or a phonetic fact which results from the application of a low-level allophonic rule of vowel devoicing.

Since no instances of preconsonantal or final /m/ were recorded following /a/ or /e/, it might be supposed that these problematic consonants are followed in underlying representations by a vowel identical to that which precedes them: /abumu/, /bagalaimi/, /gomogomo/, etc. There are, however, two difficulties with this proposal. First, comparative evidence shows that the deleted vowel was not always identical to the vowel of the preceding syllable (thus gomgom < * komu komu). Supplying the missing vowel without phonetic or morphophonemic support from the language itself can therefore be a matter of rather hazardous guesswork. Second, although most of items 1-14 are represented by a single token in my fieldnotes, the second person singular Set B pronoun -m was recorded repeatedly in possessive paradigms as a final nasal. In at least some morphemes, then, a final vowel appears to have been genuinely lost. For the two reasons just given preconsonantal and final /m/ are tentatively written in a small number of forms. Further checking of the phonetic details of these forms by future fieldworkers on the language is, of course, strongly recommended.

2.3 Morphophonemics

Several morphophonemic problems were raised in connection with the numerals and will be discussed now.

In the first of these ata was seen to alternate with ati in ata *four*, ka-sa-ŋaulu-ga-ata *fourteen* next to ga-ati-ŋaulu *forty*. It has been suggested elsewhere (cf. e.g. Blust 1974:105) that Proto-Oceanic had both *pat and *pati *four*. Mussau ata, ati may therefore reflect POC *pat and *pati respectively, though any syntactic distinction that may once have obtained has apparently now been lost.

A second alternation noted earlier in the numerals was that of nomo and onomo in nomo *six* and ga-onomo-ŋaulu *sixty*. Historically *onomo *six* is expected, but all other numerals below ten are phonetically disyllabic (/ualu/ = [walu]), a fact which we may presume to be perceptually more salient than the fact that all multiples of ten below one hundred consist of six syllables except sixty, which consists of seven. The alternation of nomo with onomo can thus be attributed to apocope under canonical pressure.

A third alternation in the numerals is that of ka-, ga-, ko-. So far as can be determined, this alternation is — at least in part — phonologically conditioned: k precedes a stem that begins with a voiceless stop (but not with s !), and o precedes a consonant-initial stem of which the second vowel is o. The latter condition, however, is ad hoc, and may not be genuinely phonological. A slightly different condition governs the alternation of the suffixal vowel in -gu (following stems that end in a rounded vowel) and -gi (elsewhere) *first person singular Set B pronoun*. The variant -ku, recorded by Capell in Emira, was not recorded in Mussau.

The last alternation in the numerals is that of ga- (which precedes numerals above ten) with zero (which precedes numerals below eleven). As noted already, Chinnery (1927) recorded this morpheme in all Emira numerals above 'one', and it seems likely from internal evidence (atu ko-tolu *three stones of the hearth, trivet*, gaisa *how much, how many?*) that a similar situation formerly existed in Mussau. The loss of ga- in the lower numerals is perhaps related to their greater conversational frequency, and the consequently greater pressure to minimise the articulatory effort needed to produce them.

The remaining morphophonemic alternations in Mussau centre about 1) the contraction of like-vowel sequences across morpheme boundary, and 2) suffixal alternations.

Contraction of the derived sequence a + a was observed in aitoka *to collect, gather* + aitaua *together* → [aitòkaitáwa] *gather together* and in e.g. agi a-asekanue → [ági àsɛkanúwɛ] *I'm sleeping*. Contraction of the derived sequence a + aa was observed in papapa *shoulder* + aanasa *hot* → [pappánasa] *noon*. As a consequence of this alternation some verbs that were not recorded in paradigmatic sets are ambiguous for the presence of an initial vowel: [amáamalo] *I am/was hungry* = /a + amaamalo/ or /a + maamalo/?

Suffixal alternations pose much more fundamental problems for Mussau synchronic phonology. The most poorly attested of these is the alternation Ø ~ a in pakas-i kaputu *handle of an adze* next to pakasa *handle (in general)*. Historically this alternation almost certainly derives from the 'capture' of a genitive marker *i by a preceding noun which ended in a consonant (hence pre-Mussau *pakas *handle*, pakas-i *handle of*. At a later stage Mussau added echo vowels to all words that ended in a consonant (hence *pakas > pakasa), thereby giving rise to the attested alternation. Although no other alternation with genitive -i was recorded, this example raises the question whether the addition of echo vowels in Mussau should be considered purely as a historical change, or as at least in part a synchronic rule.

This problem is raised much more acutely — at least in the corpus collected — in connection with Mussau adjectives. Most of the color terms are reduplicated, and in raerae-ana *red* and usouso-ana *white* the presence of a suffix -ana seems incontestible. To isolate a suffix of the same shape in words such as beroberoŋana *black*, kulukulutana *dirty* or raramukana *sharp*, however, we must admit some morphophonemic final consonants which may in fact never appear as such phonetically. It would be comforting if the problem could be resolved by simple appeal to a more abstract level of phonological representation, but unfortunately this is not the case. As seen earlier, -ana alternates unpredictably with -ena, -na and zero. Consequently many adjectives which were recorded only in morphologically complex form are open to more than one morpheme analysis: [bɛ̀robɛ̀roŋána] = /beroberoŋ-ana/ or /beroberoŋa-na/?; [ówna] = /ou-na/ or /ouna/ (plus zero)? No definitive solution to these problems will be attempted in this paper, and the attributive ending will thus be retained for purposes of lexical representation (hence beroberoŋana, ouna, usousoana, etc.). Where it is necessary to recognise a morpheme boundary in the discussion of historical phonology I do so, but without commitment as to the status of such a boundary in Mussau as it is spoken today.

2.4 Phonetics

The discussion of phonetics will be divided into 1. consonant and vowel allophones, 2. stress and length, 3. stress shift and 4. syncope.

2.4.1 Consonant and vowel allophones

The consonant phonemes of Mussau have their expected phonetic values, with the following qualifications: 1. all stops are unaspirated, 2. /t/ is postdental, 3. /b/ is spirantised intervocalically,[10] 4. /r/ is a 2-3 tap alveolar trill.

The spirantisation of /b/ was noted both within a morpheme and across morpheme boundary: /teba/ → [tɛ́βa] *a/one*, /taliŋa boloŋo/ → [talíŋa βolóŋo] *deaf*. /g/ was occasionally recorded as a spirant intervocalically within a morpheme but appears to be much less consistently spirantised than /b/ in this environment. Spirantisation of /g/ was not heard across morpheme boundary.

Mussau vowel phonemes have their expected phonetic values except as follows: 1. high vocoids tend to be non-syllabic in certain environments, 2. /e/ is [e] before another vowel, but [ɛ] elsewhere, 3. final vowels are optionally devoiced, 4. when not devoiced final vowels are sometimes followed by slight glottal closure.

Environments in which high vocoids tend to be non-syllabic are: a) word initially before a vowel (/iema/ → [yɛ́ma] *knife*), b) word finally after a vowel (/niu/ → [níw] *coconut*), c) intervocalically, both within a morpheme and across morpheme boundary (/lauei/ → [láwey] *Hibiscus manihot*, /isoi-e-la/ → [isoyɛ́la] *cut it!*), d) postvocalically before a consonant (/pouru/ [pówru] *mountain*, /tauba/ → [táwβa] *sardine*). In the one known instance where conditions a) and b) both apply, a) takes precedence: /ui/ → [wi] *tail*. It is noteworthy that many words which contain only two vocoids are apparent exceptions to semivocalisation, as with /ia/ → [íya] *elephant-ear taro*, /ua/ → [úwa] *crocodile* and /ue/ → [uwe] *fruit*. These exceptions, however, are united by a common denominator: the second vowel is non-high. A very similar condition has been noted for the Kayan dialect of Uma Juman in Sarawak (Blust 1977a:74), where initial high vowels are semivocalised before a non-low vowel, but not before a low vowel. If the phonetic facts are accurate, they suggest that high vowels generally tend to become non-syllabic more readily before a different high vowel than before a mid vowel, and more readily before a mid vowel than before a low vowel. A few further remarks on semivocalisation will be made in connection with stress (2.4.2).

The optional devoicing of final vowels in Mussau was recorded only following voiceless obstruents and nasals. Although my corpus contains no examples of full devoicing following a voiced obstruent or liquid, it is likely that a weaker tendency to devoice final vowels also exists in these environments. As noted earlier, a 'phantom' -h was recorded in a single token of /agi/ *first person singular Set A pronoun*, and in /gaga/ *manta ray*, which was recorded only once. Given the well-established tendency to devoice final vowels in other environments, the anomalous phone in these two transcriptions can be seen as a partial devoicing of the final vowel.

Finally, the weak glottal closure that was sometimes observed following a final vowel may be indirectly related to the phenomenon of final devoicing. Mussau appears to be a language torn between an inherited phonemic tendency to maintain open syllables, and a secondary phonetic tendency — evidently shared with some other languages of the New Ireland area — to devoice vowels in final position, and in certain word-internal environments. If the phonetic tendency to final devoicing is viewed as a type of lenition ('erosion from the right'), the glottal coda of final syllables might be seen as a type of fortition motivated by structural pressures which are acting to preserve the favored canonical form. However, non-phonemic final glottal stop is also widespread in the languages of the Admiralty Islands, and its presence in the speech of my informant may be due to contact influence.

2.4.2 Stress and length

In the great majority of cases primary stress was recorded on the penultimate vocoid:

[rámɛ]	*chew*	[talíŋa]	*ear*
[sésa]	*one*	[màlatáw]	*flesh, meat*
[ařóa]	*cuscus*	[ràmuràmutípa]	*tongue*

Nonetheless, a few apparent stress contrasts are found, as in:

A1	[báo]	*carry pick-a-back*
A2	[baó:]	*rain*

Since stress and length tend to co-occur in natural languages the length in [baó:] might be viewed as a predictable consequence of stress. But vowel length clearly is contrastive (and independent of stress) in e.g.

B1	[máo]	*heal*
B2	[má:o]	*boil, abscess*

Given the contrast in B1 : B2, the contrast in A1 : A2 is most parsimoniously attributed to underlying length, and primary stress can be assigned to the penultimate mora of the word. It is possible that phonemic length in the vowels has somewhat different realisations related to quality, as the vowel sequence in /ulaa/ *swamp taro* and /mamaa/ *gecko* sounds longer than the sequence in /baoo/.

In a number of words with phonetic penultimate stress the stressed vowel is *phonemically* prepenultimate. This is true only where semivocalisation has occurred (2.4.1.), as in:

/ateio/	[atéyo]	*water*
/katai/	[kátay]	*pandanus sp.*
/pouru/	[páwru]	*mountain*
/taia/	[táya]	*generic for large crabs*
/tauba/	[táwβa]	*sardine*

This observation might be used to support the interpretation of non-syllabic high vocoids as phonemic semivowels in Mussau. However, consistency would then compel us to recognise atypical consonant clusters in e.g. /powru/ *mountain* and /tawba/ *sardine*. All high vocoids are therefore interpreted phonemically as vowels, and semivocalisation is presumed to occur prior to stress placement.

2.4.3 Stress shift

Mussau has a rule of stress shift which is reminiscent of the well-known rule in Malay and some other languages of western Indonesia. In accordance with this rule stress shifts after affixation so as to remain on the penultimate syllabic of the word:

/nima/	:	[níma]	*hand*
/nima-gi/	:	[nimági]	*my hand*
/niu/	:	[níw]	*coconut*
/niu-na/	:	[niyúna]	*its coconut*

Unfortunately possessive paradigms were noted schematically in my field-notes (e.g. níma, nimá-gi, -m, -na) and are not included in the limited material that was tape-recorded. It is thus impossible to say definitely where stress

falls in nouns that are possessed with -m. My recollection, however, is that stress falls on the last stem vowel in all forms suffixed with singular possessive markers. If true this may indicate that -m still contains an underlying final vowel.

2.4.4 Syncope

One of the most conspicuous phonetic facts about Mussau is the presence of geminate consonants both initially and intervocalically. I recorded all consonants except /b/ and /s/ as geminated in some words, and it is likely that the absence of [bb] and [ss] is fortuitous.[11] Generally an alternative pronunciation was recorded in which the consonants of the geminate cluster were separated by a vowel identical to that which follows the geminate: [m:úko] ~ [mumúko] *holothurian, sea cucumber*, [t:úlu] ~ [tutúlu] *housepost*, [kaβít:o] ~ [kaβitóto] *nit, egg of a louse*. Such long forms were said to be more commonly used by 'old people', and seem clearly to correspond in relevant details to the phonemic representation. Consonant gemination in Mussau can thus be attributed to a synchronic rule of syncope which deletes the vowel of the first of two successive identical syllables.

The deletion of the first vowel in the environment $C_1V_1C_1V_1$ (where subscript identity = class identity of segment) is of particular interest from a comparative viewpoint, as it parallels a historical change reported for Trukese by Goodenough (1963) and a change-in-progress reported for the Polynesian outlier of Takuu by Irwin Howard (personal communication).[12] Changes of the type POC *tutuk-i > tuki are widespread in Oceanic languages, and were attributed to truncation by haplology under canonical pressure in Blust (1977b). However, as noted there (fn. 29) such truncations may in fact have been products of syncope plus geminate reduction.

As seen already, heterorganic consonant clusters are tentatively recognised in gomgom, malumlum and tumtumŋana. It is noteworthy that the conditions for historical syncope in these forms include not only the presence of /m/, but also reduplication. Despite this general resemblance the two rules in Mussau (the first presumably diachronic, the second synchronic) appear to be fundamentally distinct.

Two further details connected with phonetic gemination in Mussau should be noted. First, where an underlying representation contains three successive identical syllables (and there are thus two possible environments for syncope), it is the *middle* vowel which drops:

/kukuku/	:	[kúk:u]	*white-tailed dove*
/malalalake/	:	[malal:akɛ]	*thin, of material*
/e mumumu/	:	[ɛ múm:u]	*to suck*
/papapa/	:	[páp:a]	*shoulder*

According to Goodenough (1963) Trukese — which like Mussau permits geminates both initially and medially — shows an identical (in this case historical) rule: *tititi > titti-n *fence of*, *papapa > pappa-n *its board*. Relevant information on this point is lacking from the other languages.

The second detail concerns the relationship of syncope to stress placement. It is noteworthy that in such forms as /kukuku/, /e mumumu/ and /papapa/ stress is penultimate both in the non-syncopated and in the syncopated forms: [kukuku] ~ [kúk:u], [ɛ mumúmu] ~ [ɛ múm:u], [papápa] ~ [páp:a]. A second rule of stress

shift which assigns primary stress to derived penultimate vocoids is thus evidently required. Alternatively, in the formal terms of generative phonology stress placement could be regarded as a late rule which applies after semi-vocalisation, affixation and syncope.[13]

3. DIACHRONIC PHONOLOGY

The discussion of diachronic phonology will be divided into 1. canonical changes and 2. segmental changes. Appendix 1 lists all Mussau forms for which I have been able to find, or to establish, a probable Proto-Oceanic etymology (several of the reconstructions being proposed here for the first time). Throughout the discussion reference is made to this body of data.

3.1 Canonical changes

Mussau is noteworthy in preserving POC final *t, *m, *n, *ŋ, *s and probably *d and *l in non-suffixed bases through the addition of an 'echo' vowel.[14] In this respect it is similar to many other languages of New Ireland, Buka-Bougainville, the New Georgia Archipelago, and to some extent of Bugotu (Isabel), but differs from most of the better-known Oceanic languages. Oceanic languages generally appear to have altered a canonical shape that permitted final consonants to one that at some stage permitted only final vowels. Languages such as Motu, Fijian or the Polynesian group accomplished this drift to open syllables through the deletion of a final consonant, thereby preserving the predominantly disyllabic canonical shape of POC base morphemes. Languages such as Mussau accomplished the same change in syllable type only at the partial expense of the favored disyllabic canonical shape. For convenience we can call these two diachronic types 'morpheme reducing languages' and 'morpheme extending languages' respectively:

Table 1

Development of POC closed syllables in 'morpheme reducing languages': (Motu, Fijian, Samoan) and in 'morpheme extending languages' (Mussau)

POC	Motu	Fijian	Samoan	Mussau	English
uRat	- -	ua	uaua	ueta	*vein*
onom	- -	ono	ono	(o)nomo	*six*
pulan	hua	vula	- -	ulana	*moon*
asa	lada	- -	- -	asaŋe	*gills*
panas	- -	- -	mafanafana	aanasa	*hot*

Following the change to an open syllable pattern some OC languages of both types (e.g. the Nuclear Micronesian languages, Raluana) lost final vowels, thus reducing trisyllables to disyllables and disyllables to monosyllables — a process which apparently is under way in Mussau at the present time. Even in

languages which have not lost final vowels secondary reduplication or the fossilisation of affixes has somewhat obscured this basic difference, but it seems likely that morpheme extending languages like Mussau have a somewhat lower percentage of disyllables than morpheme reducing languages which have preserved POC final vowels. Finally, like the morpheme reducing languages Mussau preserves original final consonants in many verb bases before a transitive suffix, as in *susud-i-a > suli-a *sew*.

3.2 Segmental changes

The discussion of segmental changes will be divided into 1. regular reflexes, 2. the problem of consonant grades, 3. irregular and indeterminate reflexes and 4. chronological ordering.

3.2.1 Regular reflexes

The discussion of regular reflexes will be divided into 1. unconditioned changes and 2. conditioned changes.

3.2.1.1 Unconditioned changes

Table 2 presents the Proto-Oceanic phoneme inventory as presently reconstructed (*j and *ñ follow Blust 1978):

Table 2

Inventory of Proto-Oceanic phonemes

consonants						vowels	
P	p^w	t		k	q	i	u
		d	j			e	o
m	m^w	n	ñ	ŋ		a	
		s					
		l		R			
	w		y				

Of the consonants listed in Table 2 *p, *t, *k, *d, *j and *s occurred both plain (oral grade) and prenasalised (nasal grade), the two grades often yielding different reflexes in attested Oceanic languages. Although differences of consonant grade have not previously been distinguished for $*p^w$, the Mussau reflexes suggest tentatively that a distinction is needed. The evidence indicates that *q probably was a stop, but occurred only in the oral grade.

For present purposes a reflex will be called 'regular' under either of two sets of circumstances: 1) if it is demonstrated in a minimum of three independent cases, even if this is not the most frequent reflex, or 2) if it is demonstrated in two independent cases so long as no more frequent reflex is known. The following regular unconditioned changes can be established for Mussau (cf. Appendix 1):

POC	MUSSAU	EXAMPLES
labials		
p	Ø	9, 29, 153
	p	17, 128, 134
	b	30, 33, 35
mp	p	129, 131, 133
	b	31, 36, 38
m	m	13, 50, 98
labiovelars		
p^w	cf. 3.2.2.	
mp^w	cf. 3.2.2.	
m^w	cf. 3.2.3.	
w	cf. 3.2.1.2.	
dentals		
t	t	24, 25, 169
nt	r	19, 194
	t	168, 179
d	l	60, 77, 164
nd	r	18, 20, 142
n	n	10, 14, 116
s	s	2, 21, 152
	r	141, 143, 144
ns	s	106, 159, 160
	r	138, 139, 140
l	l	9, 78, 80
	Ø	52, 59, 179
palatals		
j	s	43, 122
nj	cf. 3.2.2.	
ñ	n	69, 107, 111
y	i	4, 7
	cf. 3.2.1.2.	
velars		
k	Ø	4, 30, 105
	k	61, 62, 176
ŋk	k	60, 63, 69
ŋ	ŋ	21, 80, 120
uvular		
R	Ø	20, 47, 49
	l	8, 85, 92
back velar/glottal		
q	Ø	29, 38, 57

The Proto-Oceanic vowels are normally reflected without change in Mussau. Exceptions are discussed under 3.2.1.2. and 3.2.3.

3.2.1.2 Conditioned changes

The following conditioned changes have been noted:

ASSIMILATION (1): *l (< *l, *R) became r if an adjacent syllable contained r (< *nd, *ns): 138, 139, 140 (with *R > l), 142. This change is entirely regular, and is responsible for the observed constraint against the occurrence of l and r within the same morpheme (2.2.).

ASSIMILATION (2): *a > e/i_ : 10, 49, 50. *a often remains unchanged in this environment, even when the vowels in question come in contact (47, 48, 78, 148). Given its relatively high frequency, however, the partial assimilation of *a to a preceding *i is perhaps best regarded as a subregularity (cf. also 1.2., discussion of -ie). By contrast, the assimilation of *a to a *following* *i appears to be sporadic (87?, 155?)

ASSIMILATION (3): *a > o/_ o : 55, 106, 125. Although the sequence *aCo generally remains unchanged (11, 20, 62, 80, 82, 92, 95), the partial assimilation of *a in this environment occurs with sufficient frequency that it seems best to regard it as a recurrent phenomenon. This change parallels the preceding one, with the puzzling qualification that the assimilation is progressive in (2) but regressive in (3). Note that the alternant ko- of the numeral marker discussed earlier (2.3.) occurs before tolu (ko-tolu-ŋaulu *thirty*), but not before onomo (ga-onomo-ŋaulu *sixty*).

CONTRACTION (1): The sequences *aw and *wa generally contracted to o: *aw (12, 162); *wa (30, 121, 122, 160, 172). Where both possibilities existed (in *-awa-) the former contraction predominated twice (12, 162) and the latter once (172).

CONTRACTION (2): The sequence *ya contracted to e in one known item (77). Since the sequence *Ra occasionally underwent a similar contraction (17, 135, 187) it seems reasonable to assume an intermediate stage in which *R > y in some words. The entire collection of forms thus shows a close parallel to the second part of CONTRACTION (1). By contrast the sequences *ay and *aR did not contract (4, 5, 7, 17, 121, 122, 135, 158). It is unclear whether the change *a > e in *ipaR > ie and *kiRam > iema should be attributed to ASSIMILATION (2) or to contraction of earlier *a and an adjacent semivowel.

CONTRACTION (3): the sequences *-aqa, *-aqo- and *-aqe- contracted to a, o and e respectively following the loss of *q in a trisyllable (97, 101, 126, 175). Contraction did not occur following the loss of other consonants in trisyllables (2, 20, 93, 102, 190) or of *q in disyllables (75, 147). Similarly, contraction did not occur following the loss of *q in a trisyllable if either of the vowels thus juxtaposed was high (57, 78). It thus seems unlikely that the syllable loss in *puqaya > ua is related to the changes discussed here.

HAPLOLOGY: A sequence of identical syllables in an inherited trisyllabic or polysyllabic word was frequently reduced by haplology: 7, 67, 91 (*makadindiŋ > makaliriŋe > makaririŋe > makariŋe), 132, 134, 144, 163, 164. Haplology did not occur in disyllabic reduplications or in known trisyllabic compounds (65, 154). Words which became trisyllabic through regular change were not subsequently reduced by haplology (72, 138), and one form which could

have been reduced actually appears to have been extended by reduplication, possibly in consequence of its expressive character (118).

3.2.2 The problem of consonant grades

Nearly a century ago Kern (1886) drew attention to the fact that both p and b in languages such as Malay correspond sometimes to Samoan f, Fijian v, but sometimes instead to Samoan p, Fijian b. He found these divergent developments inexplicable.

Dempwolff (1920:5) maintained that the correspondences indicated by Kern were due to differences of *consonant grade*: PAN *p/b > SAM f, FIJ v, but *mp/mb > SAM p, Fij b. He demonstrated convincingly that the languages of island South-East Asia generally support the reconstructed oral/nasal grade distinctions. However, in some cases it was necessary for him to assume that Oceanic and non-Oceanic cognates contain obstruents with opposite consonant grades. Dempwolff's theory of consonant grades has been widely accepted by Oceanic linguists, but in recent years it has been found inadequate in accounting for two types of problems. First, consonant grade 'cross-over' is encountered not only between Oceanic and non-Oceanic AN languages, but also between Oceanic languages themselves, thus rendring the reconstruction of Proto-Oceanic consonant grade a difficult matter in some morphemes. Second, as noted in Blust (1976) some of the best-known Oceanic languages have not two, but three consonant grade reflexes of the palatals. Other languages show similars problems for the labials, dental and velars.

The phenomenon of consonant grade 'cross-over' is discussed in Blust (1978), where it is shown that for many morphemes the consonant grade reconstructed for a given obstruent is a function of the languages chosen as criterial witnesses (some widely separated witnesses supporting the oral grade, others the nasal grade). To cite one of a number of possible examples, Nali, Ere (Admiralties) ð̃uh, Fijian dovu point unambiguously to POC *ntopu, but Mussau, Manam tou point just as clearly to POC *topu *sugarcane*. For other morphemes a single consonant grade appears to be consistently reflected. Thus, to my knowledge all languages that distinguish POC *nd from *d and *nt from *t reflect the prenasalised stop in the words for *blood*, *pandanus* and *banana* (POC *ndaRaq, *pandan, *punti). Moreover, this consistency holds even where other stops in the same morpheme exhibit inconsistent consonant grades, as with Proto-Admiralty *b̃uð̃i (< *mpunti), Mussau uri, Fijian vudi (< *punti) *banana*.

We might attempt to modify the consonant grades of established Proto-Oceanic reconstructions so as to achieve greater consistency with the Mussau reflexes, but this almost certainly would be futile since other languages would contra-indicate the changes. Instead, I assume the following consonant grade reflexes in Mussau. The number of instances of each reflex in Appendix 1 is given in parentheses:[15]

1. a) *p > Ø (39)
   b) *mp > b (12)
   > p (10)

2. a) *t > t (39)
   b) *nt > r (2)

3. a) *d > l (14)
   b) *nd > r (10)

4. a) *s > s (41)
   b) *ns > r (7)

5. a) *j > s (2)
   b) *nj > (no examples)[16]

6. a) *k > Ø (28)
   b) *ŋk > k (15)
      > g (3)

7. a) *p^{w} > Ø (1)
   b) *mp^{w} > b (1)

In each case the decision as to which segment should be considered the oral grade (OG) and which the nasal grade (NG) reflex is based on three considerations:

1. degree of constriction (OG reflexes are likely to be more open, NG reflexes more closed articulations)
2. relative frequency (OG reflexes are likely to be more frequent than their NG counterparts)
3. pattern of mergers (the consonant grade assumed for one segment type is more likely to merge with the *same* consonant grade of another segment type than with its opposite)

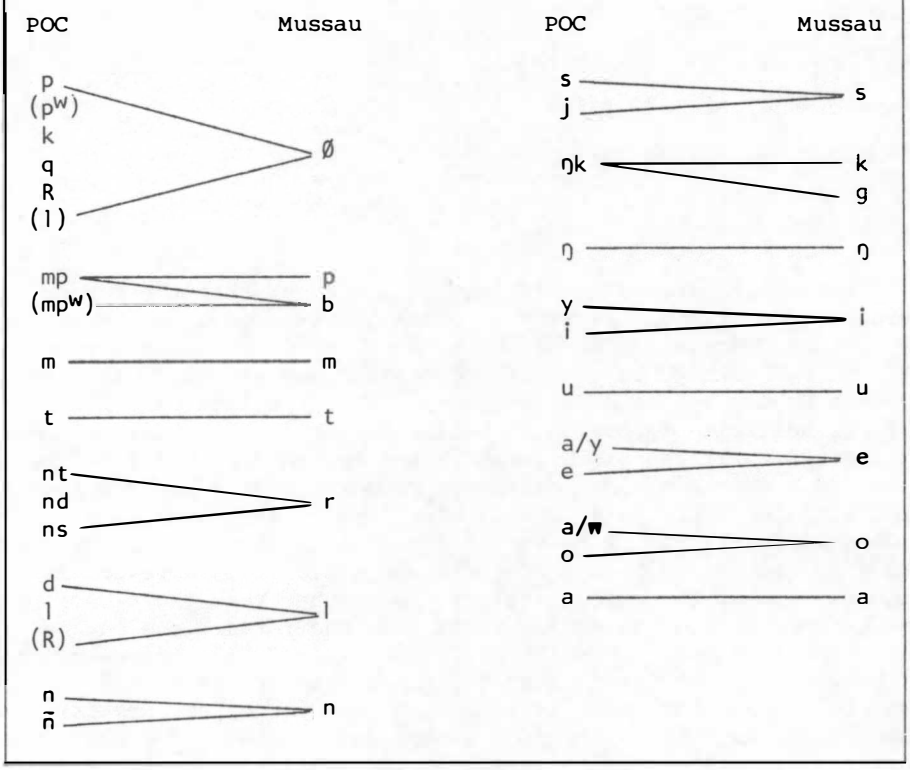
Consideration (1) favours Ø as the OG reflex of POC *p and *k, and suggests that consonant grade distinctions — though not previously reconstructed for Proto-Oceanic — also occur in reflexes of *p^{w}: uena < *kup^{w}ena *casting net*, but bo, bo-boŋi-ena < *mp^{w}oŋi *night*. Consideration (2) supports this decision for *p and *k and also suggests that t is the OG reflex of *t, and s the OG reflex of *s (and *j). Consideration (2) only weakly supports l as the OG reflex of *d, but this decision is further strengthened by consideration (3), since the merger of *nt, *nd and *ns is phonologically more plausible than the merger of *nt, *d and *ns. As noted by Dempwolff (1937) NG reflexes in Oceanic languages sometimes occur in environments from which they are excluded in non-Oceanic languages, as in Mussau sair-i-a (< *saind-i-a) *split* and makariŋe (< *maŋka-dindiŋ) *cold*.

Developments such as POC *pakiwa > Mussau baio (< *mpakiwa) *shark* or *nsiwa > sio (< *siwa) *nine*, then, will not be considered irregularities. Rather, they will be treated as part of the general problem of 'cross-over' in consonant grades. The multiple NG reflexes of *p and *k present difficulties that I hope to address in a future publication.

The regular changes from Proto-Oceanic to Mussau are summarised in Table 3:

Table 3

Regular changes from POC to Mussau, indicating phonemic mergers and splits[17]



3.2.3 Irregular and indeterminate reflexes

The following irregular reflexes have been noted:

(1) *u > i : 3/44, 157

(2) *u > ii : 35

(3) *-V > Ø : 4, 45, 88, 141, 172

(4) *-t > Ø : 17, 39

(5) Ø > -e : 21, 91

(6) *-pa > o : 33, 34

(7) *-ŋi > Ø : 37, 74

(8) *d > l,r : 51

(9) *t > k : 68, 147

(10) *n > Ø : 75, 81

(11) *q > k : 87

(12) *i > e : 104, 173

(13) *l > n : 112 (?)

(14) *d > n : 115

(15) *o > a : 122

(16) *l > r : 127, 195

(17) *a > e : 87 (?), 155, 181, 185

(18) *R > k : 158

(19) *R > n : 171

(20) *-ya > Ø : 183

(1) : although -gi alternates with -gu, it is clear that the former is the underlying (unconditioned) variant in Mussau, even though the latter agrees more closely with POC *-ŋku. Most witnesses support POC *au as an irregular development from PAN *aku *first person singular subject pronoun.* It is therefore likely that Mussau agi is modelled on -gi; (3): the loss of a final vowel after a nasal is sufficiently common to be considered a subregularity. However, as remarked under 2.2. it is possible that forms recorded with a final nasal (except -m *second person singular possessive pronoun*) have a careful speech pronunciation with the anticipated vowel. The loss of the final vowel in *kayu > ai *wood* is paralleled by *qayuyu > aiu *coconut crab* and *puqaya > ua *crocodile*, and so might also be considered a subregularity. However, many Oceanic languages appear to reflect *kai or *kau rather than *kayu *wood*, and both aiu and ua show loss of an entire syllable. The former loss may be attributed to haplology, while the latter is unexplained; (5) the unexpected supporting vowel -e appears twice after *ŋ. That this is not a conditioned change, however, seems likely from *nsalaŋ > raraŋa *kind of sea urchin*; (6) the parallel changes *mpapa > bao *carry pick-a-back* and *mpapaq > bao *short* suggest that *p sporadically became w in these words, the resulting forms then undergoing CONTRACTION (1). Since no other reflexes of POC etyma which contain the sequence *pVp are known, it is conceivable that this is a conditioned change parallel to the well-known Eastern Polynesian dissimilation of PPN *f ... f to *w ... h; (7) the sporadic loss of an identical last syllable in the words for 'night' (but not 'black'!) and 'day' strongly suggests a meaning-based motive for this change; the details, however, remain obscure; (8) this puzzling alternation, if accurately recorded, may reflect a difference of consonant grade; (10) if Mussau tuutuu *to cook* is associated with POC *tunu *burn, cook* the change *n > Ø might be considered a subregularity, as it would then be attested in three forms. The difficulty with this proposal is that the changes *daqan > laa and *dapan > lapa could be due to analogical wrong division of earlier forms ending in -na on the misapprehension that this sequence was the third person singular possessive suffix. In view of this possibility the proposed etymology of tuutuu is perhaps best abandoned: (11) *q > k is possibly paralleled in *panaq *shoot with a bow* > ai manaki *bow*, but the latter form shows two irregularities, and is best discarded for the present; (17) this change could be regarded as a subregularity. However, given the distinct environments of 87 and 155 as against 181 and 185 I prefer to treat all instances of *a > e as irregular.[19] No explanation can be suggested for any of the remaining sporadic changes.

The change *m^w > m (136) may be regular, but the available data are insufficient to determine this.

In addition to the foregoing a morpheme division is assumed in 6, 26, 57 (ŋitau), 64, 137, 154 and 165 (usulu). It is possible that Mussau ainao is a mishearing of **aenao, and thus points — like many reflexes in the Admiralty Islands — to *papenako.[19]

Some other items may also turn out to reflect a POC etymon, but show semantic disagreements that cast doubt on the validity of cognation, or exhibit phonological irregularities for which parallels in at least two other words are as yet unknown. Examples in the former category include: 1) ataŋisi *a tree*: *Casuarina equisetifolia* (< POC *taŋis *weep*, with prefix?), 2) paka *a tree*: *Terminalia catappa* (< POC *mpaka *banyan*?), 3) oana *large brown* or *yellow four-cornered fish* (probably triggerfish species; < POC *qawan *the milkfish: Chanos chanos*?), 4) tasi *brother-in-law* (< POC *tanji *younger sibling of the same sex*?) and 5) utana *garden* (< POC *qutan *forest*?). Examples in the latter category include: 1) POC *kan > ane *marker of edible possession* (?; expected **ana), 2) POC *mañawa (PAN *ma-ñawa) > i-noa *to breathe* (?; expected **manoa), 3) POC *lolo > loa *red tree ant* (?; expected **lolo), 4) POC *maqudip > (ma)maulue *living, alive* (?; expected **mauli), 5) PAN *ma-wanan > muenana *right side* (?; expected **maonana), 6) POC *papaq > pa *mouth* (?; expected **aa/papa/baba), 7) POC *ndanum > rarum *fresh water* (?; expected **ranum(u)) and 8) POC *tunu > tuutuu *to cook* (?; expected **tunu). As already noted (1.2), Mussau may have a locative marker i < POC *i. Finally, in Blust (1984) Kwaio masi-ʔa, Lau ma-masi, Marshallese mā-met *sweet* are associated with POC *ma-qasin *salty*, with common change of meaning. However, in view of masini *salty*, Mussau masik-ana *sweet* cannot be interpreted in this way, and together with the other forms may indicate a previously overlocked POC etymon *masik.

3.2.4 Chronological ordering

It is clear that the changes discussed in the preceding sections did not all occur at once. Accordingly an attempt is made in this section to establish their relative chronology.

The most important ordering relations among regular changes concern the loss of consonants, the contraction of vowel sequences and the addition of supporting vowels. Throughout the following discussion it is assumed that consonants which disappeared were lost in all positions through a single change (thus *p > Ø, not *p- > Ø, *-p- > Ø, *-p > Ø as historically distinct changes). If this assumption is false some of the conclusions that follow will be invalid.

It has been shown that where *q was lost in a trisyllable a sequence of like vowels thus juxtaposed contracted:

POC	MUSSAU	ENGLISH
maqasin	masini	*salty*
maqati	mati	*low tide, dry reef*

It is noteworthy that contraction did *not* take place if the lost consonant was *p, *k or apparently *R:

POC	MUSSAU	ENGLISH
panas (> pa-panas)	aanasa	*hot*
mapat	ma-maat-ana	*heavy*
pulaka	ulaa	*taro (Cyrtosperma)*
ma-puRuk	mauu	*rotten, to stink*

These observations can be accounted for most simply if we assume the following order of changes, where (1) must precede (2) and (2) must precede (3), (4) and (5), but the latter three changes are unordered relative to one another:

1. *q > Ø
2. CONTRACTION (3)
3. *p > Ø
4. *k > Ø
5. *R > Ø

Now consider the contrast between like vowel sequences and simple vowels in such pairs as:

POC	MUSSAU	ENGLISH
moñak	mona	*tasty; fat* (n.)
pulaka	ulaa	*taro (Cyrtosperma)*

By allowing rule (4) to apply before rule (2) Mussau mona can be derived in the following way:

*moñak	
moñaka	(echo vowel)
moñaa	(4)
moña	(2)
mona	(ñ > n)

However, as we have already seen, (4) cannot be ordered before (2), since CONTRACTION (3) would then also apply to *pulaka, yielding the non-occurring form **ula. In other words, mona and ulaa show that the merger of *-ak and *aka which we would have expected as a result of the addition of echo vowels apparently never took place: *k was lost before echo vowels were innovated. Much the same can be said of *R, as no reconstructed form ending in this segment contains a like vowel sequence: *pitaquR > itau (not **itauu), *niuR > niu (not **niuu), *wakaR > oa (not **oaa), etc. For these reasons it must be concluded that the addition of echo vowels in Mussau postdated the loss of *k and *R in final position, and hence also changes (1) and (2). The available data do not permit a similar statement with regard to *p.

The foregoing inference is of general interest to Oceanic linguistics, since many other languages which have added echo vowels have lost neither *k nor *R. We can therefore conclude 1) that echo vowels were not present in Proto-Oceanic and 2) that the addition of echo vowels occurred independently in a number of languages over a relatively continuous geographical area in Western Melanesia.

Finally, it also appears possible to establish the chronology of several minor rules or sporadic changes relative to the addition of echo vowels in Mussau. Thus, the loss of *t in *apaRat > apae and of *n in *daqan > laa evidently preceded the addition of echo vowels, since otherwise we would expect

a three-vowel sequence in the former (**apaea) and a contraction of *-aqa- (**la) in the latter. By contrast, the change *a > e in *kiRam > iema (not **ieme) and *uRat > ueta (not **uete), like the loss of *t in *mpulut > buluu (not **bulu) followed the addition of echo vowels, an inference that is partly confirmed by Emira uata *sinew* and possibly iama *handle*.[20]

4. CONCLUSIONS

The present study should remind us above all else how few really thorough descriptions are yet available for the 400 or more AN languages of Melanesia. Nonetheless the limited analyses offered here hopefully mark an advance over Chinnery (1927), who gives no phonetic information and whose arbitrary word divisions can be highly misleading (e.g. ama-tau-tuai-ili *coward*, where matautu < POC *matakut *fear, afraid* is thoroughly disguised). Most importantly, the vocabulary has made possible a much improved understanding of Mussau historical phonology.

It has been said that many of the AN languages of Melanesia contain little non-basic lexical material with a known etymology, yet more than one third of *all* Mussau lexical items collected (not just those in the 'basic' vocabulary) have a probable Proto-Oceanic source. This suggests that a fuller vocabulary could provide considerably more comparative material. At the same time Mussau is certainly not among the lexically most conservative Oceanic languages. In a still unpublished study (Blust 1981b) Mussau was found to retain about 25.6% of the items reconstructed for Proto-Malayo-Polynesian (= Proto-Extra Formosan) on a modified version of the Swadesh 200-item lexicostatistical test list. As such it ranks 33rd in a sample of 70 Oceanic languages, or at about the 53rd percentile. Some of the more conservative of these languages (Fijian, Mota, the languages of the South-east Solomons and Polynesia) attracted comparative attention from an early date and are now relatively well described. But the lexicons of many others (e.g. Raga, Nauna, Nakanai, Leipon, Nguna, Wogeo and Seimat) are known only through short survey lists if at all. Apart from its inherent value to Oceanic linguistics, then, the present vocabulary may have an added value in inspiring a heightened awareness of the wealth of comparative lexical material that remains to be tapped from the languages of this large and still poorly described region.

5. ELICITED ROOT MORPHEMES AND MORPHOLOGICALLY COMPLEX FORMS[21]

A

1 aanasa warm, hot; to heat
aanasa manu to heat, boil water

2 aasoŋo rafter

3 aau upper limb
aau keke thigh
aau nima upper arm

4 abu to blow with the breath (cf. kuu)

5 abum anthozoan, sea anemone

6 agi first person singular class A pronoun

7 agueguli black ant (P. anis; cf. loa)

8 ai_1 stick, tree, wood
ai bua areca palm
ai erasi jointed vine the fiber of which is used in making nets

8 ai kaukau slitgong
ai keli fishing spear; punting pole (cf. ai tioŋo)
ai lala mast
ai manaki hunting bow
ai ŋ alata fishing pole
ai patoi outrigger boom (cf. ioro)
ai raramuti lime spatula (P. stik kambang)
ai salo bed; storage shelf for firewood, etc.
ai salo ŋ olimo platform on outrigger canoe
ai tioŋo punting pole (cf. ai keli)

9 ai_2 thing, instrument, implement[22]
ai aloalo rudder of boat
ai e sio anua anchor (= thing that goes down to the land?)
ai gagali razor (traditionally of shell)
ai guma tongs
ai kakala broom
ai kame koko bait
ai pake ŋ ale thatch (= thing to cover the house)
ai panukana wooden neckrest, pillow
ai saesae ladder (= thing for climbing)
ai sapisapi coconut scraper
ai sila comb
ai tuutuu cooking vessel (= thing for cooking)

10 ai_3 hundred

11 aia to pull (cf. kunei)
aia la pull it! (possibly ai-a-la)

12 aiei earth oven

13 ainao to steal

14 aiobi to fight, as in war (possibly ai-obi)

15 aiora to copulate, have sexual intercourse (possibly ai-ora)

16 airari thousand (possibly ai-rari)

17 aisosa kind of basket (cf. kaka, keru, laka)

18 aitauna together

19 aitoka to collect, gather (possibly ai-toka)
aitoka aitauna to collect together

20 aiu coconut crab, *Birgus* sp. (cf. kitou, rikarikae, taia)

21 akala current, tide
akaakala to flow

22 akapa all

23 akarusi (-a, -e-la) to throw away, discard

24 akou inverted, upside-down

25 aku to fill with water

26 alai afternoon
e lo alai good afternoon (greeting)

27 alaŋitana saltwater eel (= ala ŋ itana?; cf. inaua)

28 alata (cf. ai_1; possibly ŋalata)

29 ale house
ale maŋa church

30 aliena centipede

31 alikietoa children (collective; = aliki e toa?[23] cf. namuu $natu_1$)

32 alo_1 (-gu, -m, -na) neck

33 alo_2 to steer
aloalo (cf. ai_2)

34 alo_3 kind of tree the wood of which is used for firewood, and was traditionally used to make fireplows

35 alo_4 (-na) desire, want (n.)

36 aloa (-gi, -m, -na) mother's brother

37 alomasaaŋa to know (things), be knowledgeable (cf. kila)

38 alomu (-gu, -m, -na) parent-in-law

39 aluse long, tall; deep
aluse taumata tu tall person

40 amaamalo hungry (possibly a-maamalo)

41 ameti (-a, -e-la) to hunt, go hunting

42 ami first person plural exclusive Class A and B pronoun

43 ane termite

44 ane (-gi, -m, -na) relation marker, edible possession

45 anua land (?) (cf. ai_2, Emira anua 'house')

46 aŋa wide open, gaping
aŋa tau open-mouthed

47 aogi back, behind

48 apae strong wind, storm wind

49 arana littoral pandanus the leaves of which are used to plait mats — probably *P. tectorius* (P. aran) (cf. aum, ieri, katai, maruna)

50 araŋa to stick, adhere to (cf. raŋasi)

51 arari (-gi, -m, -na) name
sei arari-m what is your name?

52 areare (cf. susu)

53 arita the putty nut, *Parinari laurinum*

54 aroa cuscus (P. kapul)

55 asaasa to swim; to drift

56 asai to pull, draw
e-asai inoa-na he is breathing (= he is drawing his breath)

57 asakararike to stumble, fall down (cf. $katuu_1$)

58 asaŋe internal gills (cf. utaliŋa)

59 asekanue to sleep (= aso kanue with morphophonemic change?)

60 asi taro, probably *Colocasia esculenta* (cf. ia, kaala, ulaa)

61 asiŋe to sneeze (onom.)

62 aso to lie down
asoaso poi to dream

63 asu smoke

64 ata four

65 atamana door opening (atama-na? cf. Emira atama 'door')

66 ataŋisi a tree, *Casuarina equisetifolia*

67 atea (-gi, -m, -na) liver

68 ateio fresh water
ateio talia lake (= round water)
ateio akaakala river (= flowing water) (cf. manu, rarum; uela)

69 atu_1 to plait (mats, baskets)

70 atu_2 stone
atu ko-tolu three stones of the hearth, trivet

71 au ash

72 auena behind, later

73 aulia to stay, tell (= auli-a?; cf. poa)

74 aum broad-leaved pandanus (cf. arana, ieri, katai, maruna)

75 autu chin, jaw

B

76 bagalaim small variety of the Malay apple, *Syzygium gomata* (cf. oaa)

77 bagii cooking vessel of plaited pandanus leaves (ceramics were not used traditionally)

78 baio shark

79 baka fishscale

80 balabala fence

81 balabalaŋa headache, toothache

82 balai fish sp.

83 balus (P) dove sp. (cf. kukuku)

84 bao$_1$ carry pick-a-back

85 bao$_2$ short (cf. tukuna)

86 baoo rain

87 batibati spider

88 batum tapioca

89 bause female, woman
bause-ni (-gi, -m, -na) wife
bause rauebulu widow

90 belu$_1$ fish corral made of stone-filled baskets

91 belu$_2$ (-a, -e-la) to throw (cf. ue$_2$)

92 beroberoŋana black (cf. boboŋiena)

93 bibi to push

94 biiso foam, froth, bubbles

95 bilae stingray (cf. gaga)

96 bili (-gi, -m, -na) back (anatomic)

97 biliki (-gi, -m, -na) skin; body
biliki niu coconut husk
biliki ŋ ai bark of a tree

98 bito (-gu, -m, -na) navel

99 bo night
bo ŋa teba one night

100 boboŋiena black (cf. beroberoŋana

101 boloŋo (cf. taliŋa)

102 bua areca nut

103 bukabukala to float

104 buluu to caulk

E

105 ea where?

106 elei to make, build

107 elobi time (?)
elobi saa when? (= what time?)

108 erasi (cf. ai$_1$)

G

109 gaa to catch (fish)

110 gaga manta ray (cf. bilae)

111 gagaa large flat fish with big mouth

112 gagaga (cf. manu)

113 gagali to shave (cf. ai$_2$)

114 gai (-a) to fetch, get

115 gaisa how much, how many? (possibly ga-isa)

116 gigima tree used to make canoes (cf. nakasa)

117 gila bird, fowl

118 goagoa catfish sp. (cf. matulubo)

119 gomgom to swallow (cf. tuku)
gomgom uela giant clam, *Tridacna* sp. (lit. 'swallow saltwater')

120 goruru edible green seaweed

121 gou to bend, fold

122 guluguluena straight, correct, true

123 guma (cf. ai$_2$)

I

124 ia$_1$ elephant-ear taro, *Alocasia macrorhiza* (cf. asi, kaala, ulaa)

125 ia$_2$ third person singular class A pronoun

126 iaa (cf. mamaulue)

127 ie (-gi, -m, -na) sister-in-law

128 iema knife

129 ieri pandanus sp. with long red or yellow fruit (cf. arana, aum, katai, maruna)

130 iina fat, grease

131 ila$_1$ pandanus rain cape

132 ila$_2$/ira third person plural class A and B pronoun

133 ilou to run

134 imuimutu moss, algae

135 inana food

136 inaŋari to talk

137 inaua freshwater eel (cf. alaŋitana)

138 inoa (-na) breath

139 io second person singular class A pronoun

140 ioi to count (cf. ira)

141 ioro outrigger boom (cf. ai patoi)

142 ira to count (cf. ioi)

143 iri (-la) to tie, bind by wrapping around (cf. nagi)

144 isoi (-a, -e-la) to cut (fish (fish, meat, rope; cf. toai)

145 ita first person plural inclusive class A and B pronoun

146 itau tree from which the slitgong is made (= *Calophyllum inophyllum?*; cf. ŋitau)

147 itu seven

K

148 kaakaa to stay
kaakaa i to stay at

149 kaala large-leaved taro sp. (cf. asi, ia, ulaa)

150 kabitoto nit, egg of a louse

151 kaikai$_1$ to dig

152 kaikai$_2$ (-na) wing
kaikai gila wing of a bird

153 kaka open-mouth carrying basket (cf. aisosa, keru, laka)

154 kakala to sweep (cf. ai$_2$)

155 kalakalaŋina near

156 kalaŋeiŋei sandfly (probably kala-ŋeiŋei; cf. kalaŋisi)

157 kalaŋisi sandfly (probably kala-ŋisi; cf. kalaŋeiŋei)

158 kalao rattan

159 kalasi to peel, as yams

160 kalio mens' sarong (P. laplap)

161 kalipa bush spirit (P. masalai; cf. raroai, tootoo).

162 kalokalo (-a) to scratch

163 kame (cf. ai$_2$)

164 kanusu to spit

165 kaŋakaŋa to laugh

166 kao to pour, spill

167 kapou monitor lizard, *Varanus* sp.

168 kapu$_1$ friend, companion (= kapu$_2$?)

169 kapu$_2$ (-gu, -m, -na) older sibling
kapu-gu my older sister
kapu-gu taita my older brother

170 kaputu adze, implement for dressing wood

171 karaane rain cloud

172 karai small clam sp.

173 karake largest digit of hand or foot
karake keke big toe
karake nima thumb

174 karasa to whet, grind a blade

175 kariboo[24] hornbill sp. with white feathers (cf. kinaku)

176 karika no, not
karika oroi not many/much; few

177 karou a tree, the roots of which yield a crimson dye, *Morinda citrifolia*

178 karuma short upright stick on the outrigger float used to connect float and boom (cf. papasa)

179 kasu$_1$ to go, walk (cf. laa$_2$)
kasukasu to walk
kasu mai come here! (vocative)
kasu-a laa to take
kasu-a mai to bring

180 kasu$_2$ (-na) gall

181 katai pandanus sp. with long fruit and small seeds (cf. arana, aum, ieri, maruna)

182 katoto star

183 katu$_1$ seed

184 katu$_2$ (cf. ŋaluŋalu)

185 katuu$_1$ (-la) to fall from a height, as fruit (cf. asakararike)

186 katuu$_2$ large snake sp. (cf. otuana, tariti)

187 kau (P) sweet potato

188 kaubebe butterfly (probably kau-bebe; cf. kurubebe)

189 kaukau (cf. ai$_1$)

190 kauru large bamboo from which combs are made

191 keke (-gi, -m, -na) foot, leg

192 keli (cf. ai$_1$)

193 kereŋana (cf. mata)

194 keru kind of basket (cf. aisosa, kaka, laka)

195 kiki small red cockatoo

196 kikiau large mound-building bird, *Megapodius*

197 kila to know (people), be acquainted with (cf. alomasaaŋa, tara)

198 kina (-gi, -m, -na) mother

199 kinaku hornbill sp. with black feathers (cf. kariboo)

200 kinari to sing

201 kiniti to pinch

202 kiriababa insectivorous cave bat

203 kirikiri a tree the crushed seeds of which are used to stupefy fish, *Barringtonia asiatica* (P. vut)

204 kiriola to turn

205 kitou hermit crab (cf. aiu, rikarikae, taia)

206 koba (-gi, -m, -na) abdomen, belly

207 koikoi coconut shell; canoe bailer of coconut shell

208 koko fish (cf. pisi$_2$)

209 kolo(kolo) to call, hail someone

210 komo sleeping mat

211 koŋurumakere marlin, swordfish (= koŋuru-makere?)

212 koronana false, untrue

213 kosa earth, soil

214 koto surf, breakers (cf. toŋetoŋea)

215 ku (-gu, -m, -na) penis

216 kukuku white-tailed dove sp. (cf. balus)

217 kulalaba big (cf. namuu)

218 kuluki to strip off bark, decorticate

219 kulukulutana dirty

220 kulum axe, implement for felling trees

221 kunei (-a, -e-la) to pull (cf. aia)

222 kunu to cough

223 kuraa fire; firewood

224 kurubebe butterfly (probably kuru-bebe; cf. kaubebe)

225 kuu to blow
kuu-e-la blow on it! (as on a fire to start it)
kuukuu to blow, of the wind; wind
kuukuu tasi hurricane

L

226 la light, radiance; day
e lala day (lit. 'it is shining')[25]
la ŋa teba one day

227 laa$_1$ branch
laa ŋ ai branch of a tree
tuu laalaa-ŋa-na fork of a branch (= 'its fork'; cf. saŋasaŋa)

228 laa$_2$ to go, walk (cf. kasu)
u-laa (you) go!
laa mai to bring
laa tau to take

229 lae hinterland, interior (cf. tubui)

230 laia ginger

231 laka round carrying basket placed on the head (cf. aisosa, kaka, keru)

232 lala (cf. ai$_1$)

233 lalu lionfish

234 lamana sea near the shore (cf. malama, malioŋe)

235 laŋasi brain
laŋasi niu/laŋalaŋasi niu pith of young coconut

236 laŋo housefly

237 lapalapa palm, sole
lapalapa keke sole of the foot
lapalapa nima palm of the hand

238 lapu kind of colourful lizard

239 laso (-gu, -m, -na) testicles

240 lauei an edible plant, *Hibiscus manihot* (cf. naula)

241 lima five

242 lisa louse

243 liu hole for housepost; grave (= liuu?)

244 liue base, bottom
liue ŋ ai base of a tree

245 liuu place (cf. tauu)
liuu ai taataau place for earth oven
liuu ŋ ai tuutuu fire place, hearth (lit. 'place for the cooking pot')

246 loa red tree ant (P. korakum) (cf. agueguli)

247 lokuloku to dance

248 loŋoti (-a) to chop wood

249 looloo to fly

250 lotoloto a hardwood tree: *Intsia bijuga* (P. kwila)

251 lua two

252 luei calm, still, of water

253 lueki to vomit

254 lutalaua morning

M

255 maao boil, abscess

256 maasu black shore bird similar to a seagull (cf. rabaŋana)

257 mai hither, toward the speaker

258 makariŋe cold

259 makere sago palm

260 makikile sour

261 makuruke raw, uncooked

262 malalalake thin, of material

263 malama lagoon, shallow green water within the reef (cf. lamana, malioŋe)

264 malaŋona dry

265 malatau flesh, meat

266 malatu large mullet sp. (P. karua)

267 malioŋe deep blue sea beyond the reef (cf. lamana, malama)

268 malumlum poisonous brown starfish (= crown of thorns?); cf. siŋakoio)

269 mama type of seaweed used to weatherproof canoes

270 mamaa gecko, house lizard

271 mamaatana heavy

272 mamama to yawn

273 mamaulue/maulue living, alive
e mamaulue/maulue iaa to be alive

274 mami first person plural exclusive class B pronoun

275 manaki (cf. ai$_1$)

276 manoi unicorn fish (Admiralty loan?)

277 manu water (cf. ateio, rarum, uela)
manu gagaga tidal wave
manu kulalaba high tide (lit. 'big water')

278 maŋa taboo, holy

279 maŋini giant squid (cf. nusa)

280 mao heal, recover

281 marase middle
e lo marase sky (lit. 'in the middle'?)

282 marieba large flying fox sp. (cf. papaamara)

283 maroate wet (cf. posona)

284 maruna small pandanus sp. (cf. arana, aum, ieri, katai)

285 masaaliki village, settlement

286 masau far

287 masikana sweet (cf. onose)

288 masina good

289 masini salty

290 masoko hiccough

291 masoso/masosona ripe, cooked

292 mata (-gi, -m, -na) eye, face; blade; source; sucker of plant
mata kaala sucker of the kaala taro
mata kereŋana sharp (cf. raramukana)
mata ŋ asi sucker of the asi taro
mata ŋ ateio source of a river
mata salusalu blind
mata ulaula spring, place where water bubbles up
mata utu pride

293 matautu/mamatautu to fear, be afraid

294 mate dead, to die (cf. ubi)
e mate la he is dead

295 mati low tide, dry reef (cf. poŋamati)

296 matulubo catfish sp. (cf. goagoa)

297 mauu pus; to stink
mauu ŋ usai pus of a wound

298 me and, with (comitative)

299 meme urine, urinate

300 miroro large fish sp. (P. kulapo)

301 mona pounded taro with coconut cream

302 monono swamp

303 mosou a tree with sweet fruit

304 mosu pig

305 muenana right side (cf. oaise)

306 mukei mango

307 mumuko holothurian, sea cucumber

308 mumumu to suck

N

309 nagi (-a, -e-la) to tie, bind by wrapping around (cf. iri)

310 nakasa tree used for canoe hulls (cf. gigima)

311 nama(nama) to eat, chew
u-nama-la saa what did you eat?
ia e-namanama bua he's chewing betel

312 nami taste
nami masini a salty taste

313 namisi to play

314 namuu big, wide; old, of people (cf. kulalaba, pokane)
namuu ŋa toa adults (collective)

315 nata coconut flower spathe (P. galimbong)

316 natu$_1$ (-gu, -m, -na) child, offspring (cf. alikietoa)

317 natu$_2$ latex-producing tree with apple-like fruit, *Palaquium* sp.

318 naula a flowering plant, *Hibiscus tiliaceus* (cf. lauei)

319 nei (-na) smell, odor
nei batum odor of tapioca
nei ŋ asi odor of the asi taro
nei ŋ ulu odor of breadfruit

320 neŋa (-gi, -m, -na) younger sibling of the same sex (cf. tue$_1$)

321 nima (-gi, -m, -na) arm, hand

322 nimuru garfish

323 ninamanama year

324 ninanana to think

325 niu coconut tree
niu-na dry coconut (= 'it's coconut? P. drai)

326 noko mosquito

327 nomo six

328 noŋonoŋo to hear

329 nou stonefish

330 nusa small squid (cf. maŋini)

ŋ

331 aŋa[26] second person plural class B (and A?) pronoun

332 ŋaapa lime gourd (P. skin kambang)

333 ŋaluŋalu tooth
ŋaluŋalu katu molar tooth

334 ŋaŋaŋala to whine, cry, weep

335 ŋiŋii (cf. taliŋa)

336 ŋitau a tree, *Calophyllum inophyllum*, coastal variety (= itau? cf. tamanu)

337 ŋoo to snore

338 ŋunupi to crush lice

339 ŋusu nose; to smell (trans.)
ŋusu poi e la smell it!

O

340 oa root
oa ŋ ai root of a tree

341 oaa large variety of the Malay apple, *Syzygium gomata* (cf. bagalaim)

342 oaise left side (cf. muenana)

343 oana large brown or yellow four-cornered fish

344 oasa rope, vine
oasa rarai betel pepper

345 obo fallow land

346 olimo boat, canoe

347 onose sweet (cf. masikana)

348 onu turtle

349 oroi much, many

350 osaosa the canarium nut (P. galip)

351 ose canoe paddle
oseose to paddle

352 oso yam

353 otolu egg

otolu gila bird egg, chicken egg

354 otuana snake (generic; cf. katuu$_2$, tariti)

355 ouna new

P

356 pa mouth; hole in a pot, canoe, etc.

357 pae stinging nettle, *Laportea* sp.

358 paepae to seek, search for, find (cf. rere)

359 paka a tree, *Terminalia* sp.

360 pakasa handle
pakasi kaputu handle of an adze

361 pake to cover

362 pakepakeŋi back of the head

363 pakieu flying fish

364 palapalaŋa thunder

365 palata sick

366 pale sail (Admiralty loan?)

367 palee hawk

368 paluaalua twin (cf. lua)

369 panukana (cf. ai$_2$)

370 papaamara small flying fox sp. (cf. marieba)

371 papapa (-gi, -m, -na) shoulder

372 papapa aanasa noon, time of day when the sun is hottest (lit. 'hot shoulder')

373 papasa connecting piece for outrigger float and booms (cf. karuma)

374 pararaŋisi gold-lip pearl shell (cf. ulaŋa)

375 parikaŋa charcoal

376 paro (-gu, -m, -na) vulva vagina

377 paru (-e-la) to hit, strike
paru e la tale ai hit him with a stick!

378 pasa(pasa) to plant
la pasa asi plant the taro!

379 pasi to cut

380 pasipasi young coconut (P. kulau)

381 pasu full (as a container)

382 pate (-a-la) to break, snap as a rope

383 patilaka forehead (apparently pati-laka; cf. patinau)

384 patinau forehead (apparently pati-nau; cf. patilaka)

385 patioŋ dolphin, porpoise

386 patoi (cf. ai$_1$)

387 patu (-na) joint, node
patu keke knee
patu nima elbow
patu tou node of the sugar-cane stalk

388 patuŋanua island (= patu ŋ anua?)

389 pau to pluck, pull out

390 paua dog

391 pen/peni pen (E)

392 piipinosa to grow (intrans.)

393 pili (-a) to crumple up

394 pisi$_1$ to fart, break wind

395 pisi$_2$ fish (P)

396 pisike small; narrow

397 poa to say, tell (cf. aulia)

398 poi$_1$ (cf. aso)

399 poi$_2$ (cf. ŋusu)

400 pokane old, of things (cf. namuu)

401 polii because
polii saa why?

402 poŋamati coral reef (probably poŋa-mati; cf. mati)

403 porapora to wash (clothes, dishes, face or hands; cf. suu)
porapora mata-m wash your face!
porapora nima-m wash your hands!

404 posalai (-a, -e-la) to slap
posalai e la slap him!

405 poso to hold, squeeze in the hand
poso a la ta nima-m hold it in your hand
poposo-a to squeeze with the hand
posoposo to hold in the hand

406 posona wet (cf. maroate)

407 pouru mountain

408 pua flower, blossom
pua ŋ ai blossom of a tree

409 pue flatfish, flounder, halibut

410 puŋana roof, ridgepole

R

411 rabaŋana seagull (cf. maasu)

412 rabarabaia lightning

413 rae (-gi, -m, -na) blood (cf. raeraeana)

414 raeraeana red (cf. rae)

415 raipa saliva

416 rame to chew

417 ramoramo sore, wound (cf. usai)

418 ramuramutipa (-gi, -m, -na) tongue

419 raŋasi to stick, adhere to (cf. araŋa)

420 rarai (cf. oasa, uru)

421 raramukana sharp (cf. mata kereŋana)

422 raramuti (cf. ai_1)

423 rarana mangrove sp. (cf. toŋo)

424 raraŋa sea urchin

425 rararasa saw grass, *Imperata cylindrica* (P. kunai)

426 rare coral limestone

427 rari (-a) to rub, as medicine on the skin

428 rariao rat

429 raroai bush spirit (P. masalai; cf. kalipa, tootoo)

430 rarum water (cf. ateio, manu, uela)
rarum i koko fish broth
rarum mata tears

431 rauebulu (possibly rau e bulu; cf. bause)

432 raum needle

433 raura frigate bird

434 rekati fishhook

435 rere to seek, search for, find (cf. paepae)

436 rikarikae hermit crab (cf. aiu, kitou, taia)

437 rira sand

438 riu bone
riu ŋ aasoŋo rib
riuriu-ena thin, skinny, of persons or animals (= 'bony')

439 roŋo to swell (cf. rupa)
e roŋo la it is swollen

440 roparopa frog

441 ropi to drink

442 roro thorn

443 rukeruke earthquake

444 rupa to swell (cf. roŋo)
e rupa la it is swollen

S

445 saa what?

446 sabana a tree with dry wood, similar to alo

447 sae up (cf. sio)
saesae to climb

448 sai to sharpen the point (of a stick, etc.; cf. supi)

449 saiki to sew, of clothes (cf. sui; suli)

450 sairi (-a, -e-la) to split

451 salana path, road, way

452 salii to husk coconuts

453 salo (cf. ai_1)

454 salusalu (cf. mata)

455 samana outrigger float

456 samusamu (-a) to bite

457 saŋasaŋa (-na) fork of a branch (cf. tuu laalaa-ŋa-na)

458 sa-ŋaulu ten (possibly sa-ŋa-ulu)

459 saŋina lime (P. kambang)

460 sapesape barracuda, sea pike

461 sapisapi (cf. ai_2)

462 sau (-gu, -m, -na) chest (of a man)

463 saua to catch (as a ball) (possibly sau-a)

464 saurorom dark

465 sei who?

466 $sesa_1$ bad

467 $sesa_2$ one

468 sii banyan, *Ficus* sp.

469 sila to comb (cf. ai_2)

470 sinaka sun

471 siŋakoio starfish (generic; cf. malumlum)

472 sio_1 down (cf. sae)

473 sio_2 nine

474 soa(soa) to shoot, stab
soa i e la shoot him!
soasoa la shoot him!

475 soana channel, passage through the reef

476 sokiki kingfisher

477 sui to sew, of mats, thatch, etc. (cf. saiki, suli)

478 suli (-a, -e-la) to sew (cf. saiki, sui)

479 sulu(-i-a) to burn (cf. usulu)

480 sunuki to carry on a pole between two men

481 sunuku pregnant

482 supi to sharpen the point (of a stick, etc.; cf. sai)

483 susu (-gu, -m, -na) breast
areare susu nipple of the breast

484 suu/suusuu to bathe, dive
suu sio to dive down
suusuu to bathe (cf. porapora)

T

485 taataau (cf. liuu)

486 taia generic for large crabs (cf. aiu; kitou, rikarikae)

487 taita male, man
taita-ni (-gi, -m, -na) husband
taita namuu old man

488 takea rollers for beaching a canoe

489 talakia/talakiena yellow

490 $tale_1$ inside

491 $tale_2$ with (instrumental), way, manner
tale saa how? in what way?

492 talia round

493 taliŋa (-gi, -m, -na) ear
taliŋa boloŋo deaf
taliŋa ŋiŋii mushroom (possibly taliŋa ŋ iŋii)

494 tama (-gi, -m, -na) father

495 tamanu a tree, *Calophyllum inophyllum*, inland variety (cf. ŋitau)

496 taŋini a fish, the Spanish mackerel

497 taon a tree with sweet fruit (P. pakpak)

498 taotaoko sea eagle

499 tara to look
tara la look at it!
tara kila to recognise

500 tariti kind of quick, small snake (cf. katuu, otuana)

501 tasi$_1$ (-gi, -m, -na) brother-in-law

502 tasi$_2$ (cf. kuu)

503 tau$_1$ (cf. aŋa)

504 tau$_2$ to give
laa tau to take
mai tau to bring
tau la give it!

505 tauba sardine (P. talay)

506 taue conch shell, triton

507 taulona large rock cod (cf. uaiata, uouna)

508 taumata person, human being
taumata tu ŋa toa people (collective)

509 tautauele dugong

510 tauu place (cf. liuu)
tauu ramoramo scar

511 teba a, one (cf. sesa$_2$)

512 teka feces; to defecate

513 teke that (distant)

514 tine intestines

515 tiŋina to stand
tiŋina sae stand up!

516 tioŋi dorsal fin

517 tioŋo (cf. ai$_1$)

518 toa(-i-e-la) to cut (string, rope; cf. isoi)

519 toka to sit
toka sio la sit down!
tokatoka to reside, live in a place

520 toko this

521 toliti maggot

522 tolu three

523 toŋetoŋea wave, swell in the open sea (cf. koto)

524 toŋo mangrove sp. with edible fruit (cf. rarana)

525 too that (near hearer)

526 tootoo shadow, reflection, spirit of the dead (cf. kalipa, raroai)

527 toto grasshopper

528 totu to wake up

529 tou sugarcane

530 tubu (-gu, -m, -na) grandparent, grandchild
tubu bause grandmother
tubu bause pisike granddaughter
tubu taita grandfather
tubu taita pisike grandson

531 tubui jungle, bush (cf. lae)

532 tubula satiated, full from eating
aŋa tubula you (pl.) are full

533 tue$_1$ (-gi, -m, -na) older sibling of the same sex (cf. neŋa)

534 tue$_2$ to fell a tree
tue la fell it!

535 tuku (-a) to swallow (cf. gomgom)

536 tukuilapu rainbow (possibly tuku i lapu; cf. lapu)

537 tukuna short (in length or height; cf. bao$_2$)

538 tumari (-a, -e-la) to hit (with the fist), punch

539 tumaroaroko bee

540 tumtumŋana dull, blunt

541 tutulu housepost

542 tuu (cf. laa$_1$)

543 tuutuu to cook (trans.)
agi a-tuutuu I'm cooking

U

544 ua crocodile

545 uaiata large brown rock cod (cf. taulona, uouna)

546 ualu eight

547 ubi to strike, kill
ubi e mate a la

548 ue$_1$ fruit
ue ŋ ai fruit of a tree

549 ue$_2$ (-a, -e-la) to throw (cf. belu$_2$)

550 uela salt; saltwater (cf. ateio, manu, rarum)

551 uena casting net

552 ueta vein, vessel, tendon

553 ui (-na) tail
ui koko tail of a fish
ui mosu tail of a pig

554 uita octopus

555 ulaa swamp taro with large leaves, *Cyrtosperma* sp. (cf. asi, ia, kaala)

556 ulana moon, month

557 ulaŋa gold-lip pearl shell (used in other parts of St. Matthias, but not in Lomakunauru; cf. pararaŋisi)

558 ulaula to effervesce, bubble up

559 ulu breadfruit

560 uŋu to work

561 uŋuru (-gu, -m, -na) head hair

562 uouna giant black rock cod (cf. taulona, uaiata)

563 uri banana

564 uru$_1$ (-gu, -m, -na) head
uru ŋ uira heart (lit. 'head of octopus')

565 uru$_2$ leaf
uru ŋ ai leaf of a tree; paper
uru rarai betel leaf (P. lip ndaka)

566 usai sore, wound (cf. ramoramo)

567 usousoana white

568 usulu coconut leaf; torch made of coconut leaf (cf. sulu)

569 utaliŋa external gills (= uu taliŋa? cf. asaŋe)

570 utana garden

571 utu (cf. mata)

572 uu feather (also 'body hair'?)
uu gila feather of a bird

APPENDIX 1

Mussau reflexes of Proto-Oceanic reconstructions

No.	POC	MUSSAU	ENGLISH[27]
1	-a	-a (transitive)	*3sg object pronoun*
2	panas (> pa-panas)	aanasa	*hot*
3	(i)-au	agi	*1sg subject pronoun*
4	kayu	ai	*wood, tree*
5	paRi-	ai- (?)	*reciprocal prefix*
6	penako	ainao	*to steal*
7	qayuyu	aiu	*coconut crab*
8	pa-Rapi	alai	*afternoon, evening*
9	pale	ale *(house)*	*public building*
10	qalipan	aliena	*centipede*
11	kalo	alo	*neck*
12	qalawa	aloa	*mother's brother*
13	kami	ami	*1pl ex. subject pronoun*
14	ane	ane	*termite*
15	panua	anua (*land*?)	*settled area*
16	aŋak/aŋap	aŋa	*to gape*
17	apaRat	apae	*storm wind*
18	pandan	arana	*pandanus*
19	kantita	arita	*putty nut*
20	kandoRa	aroa	*cuscus, phalanger*
21	asaŋ	asaŋe	*internal gills*
22	asiŋe	asiŋe	*to sneeze* (onom.)
23	kasu/qasu	asu	*smoke*
24	pat	ata	*four*
25	kataman[28]	atamana	*doorway*
26	qate	ate-a	*liver*
27	patuR	atu	*to plait*
28	patu	atu	*stone*
29	qapu[29]	au	*ash*
30	pakiwa[30]	baio	*shark*
31	(mpada)mpada	balabala	*fence*
32	mpalai	balai	*fish sp.*
33	papa	bao	*carry pick-a-back*
34	mpapaq	bao	*short*
35	pujoq	biiso	*foam, bubbles*
36	mpito[31]	bito	*navel*
37	pʷoŋi	bo, bo-boŋi-ena *(black)*	*night*
38	mpuaq	bua	*areca nut*
39	mpulut	buluu *(to caulk)*	*gum, sap glue*
40	e-	e-	*3sg subject marker*
41	pea[32]	ea	*where?*
42	ka	ga/ka/ko	*ordinal marker*
43	pija	ga-isa	*how many/how much?*
44	-ŋku	-gi/gu	*1sg possessive pronoun*
45	ŋkommuŋkomu	gomgom *(to swallow)*	*to rinse the mouth, gargle*

No.	POC	MUSSAU	ENGLISH
46	i	i	*genitive*
47	piRaq	ia	*taro (Alocasia sp.)*
48	ia	ia	*3sg subject pronoun*
49	ipaR	ie	*sister-in-law*
50	kiRam	iema *(knife)*	*axe, knife*[33]
51	ida	ila/ira	*3pl subject pronoun*
52	limut	imuimutu	*moss, algae*
53	kinan	inana *(food)*	*meat*
54	iko	io	*2sg subject pronoun*
55	kianso	ioro	*outrigger boom*
56	kita	ita	*1pl in. subject pronoun*
57	pitaquR	itau/ŋ-itau	*a tree: Calophyllum sp.*
58	pitu	itu	*seven*
59	kali	kaikai	*to dig*
60	ŋkadaŋi	kala-kalaŋi-na	*near*
61	kadasi	kalasi	*to peel*
62	kaRo-a	kalo-kalo-a	*to scratch*
63	ŋkanus[34]	kanusu	*to spit*
64	qasu	k-asu	*gall (bladder)*
65	(kau)mpempe[35]	kaubebe	*butterfly*
66	kaundu	kauru	*bamboo sp.*
67	kilala	kila	*to know (people)*
68	tina	kina	*mother*
69	ŋkiñit	kiniti	*to pinch*
70	(koi)koi	koi	*coconut shell*
71	kondon	koron-ana	*false*
72	kukuk	kukuku *(dove sp.)*	*to coo, murmur*
73	lapa[36]	kula-laba	*big*
74	daŋi	la *(light, radiance)*	*day*
75	daqaŋ	laa	*branch*
76	daka[37]	laa	*to go, walk*
77	daya	lae	*interior, hinterland*
78	laqia	laia	*ginger*
79	laman	lamana *(littoral sea)*	*deep sea*
80	laŋo	laŋo	*housefly*
81	dapan	lapa-lapa	*palm, sole*
82	laso	laso	*testicles*
83	lima	lima	*five*
84	linsaq	lisa	*nig, egg of louse*
85	Ropok	loo-loo	*to fly*
86	dua	lua	*two*
87	luaq	luek-i	*to vomit*
88	-mu	-m	*2sg possessive pronoun*
89	ma-	ma-	*attributive/stative*
90	mai	mai	*hither, toward speaker*
91	makadindiŋ	makariŋe	*cold*
92	(ma)-Raŋo	ma-laŋo-na	*dry*
93	mapat	ma-maat-ana	*heavy*
94	mami	mami	*1pl ex. possessive pronoun*
95	mapo	mao	*to heal, recover*
96	(ma)-sauq	masau	*far*

No.	POC	MUSSAU	ENGLISH
97	maqasin	masini	*salty*
98	mata	mata	*eye, face, focus*
99	matakut	(ma)matautu	*afraid*
100	mate	mate	*die, dead*
101	maqati	mati	*low tide, ebb*
102	mapuRuk	mauu *(pus; to stink)*	*rotten*
103	me	me	*and, with*
104	mimiq/mimiR	meme	*urine, urinate*
105	moñak	mona	*tasty; fat* (n.)[38]
106	mansoku	mosou	*cinnamon tree*
107	-ña	-na	*3sg possessive pronoun*
108	ñama	(nama)nama	*to eat, chew*
109	ñami	nami *(taste)*	*to taste*
110	natu	natu	*child*
111	ñatuq	natu	*tree sp.*
112	lima/nima	nima	*hand, arm*
113	niuR	niu	*coconut tree*
114	onom	(o)nomo	*six*
115	doŋoR	noŋo-noŋo	*to hear*
116	nopuq	nou	*stonefish*
117	nusa	nusa	*squid*
118	(ŋa)ŋada	ŋa-ŋaŋala	*to whine, whimper*
119	ŋoRo	ŋoo	*to snore*
120	ŋusu	ŋusu *(nose)*	*labial circle*
121	wakaR	oa	*root*
122	waRoj	oasa	*vine, rope*
123	poñu	onu	*turtle*
124	ponse	ose	*canoe paddle*
125	qatoluR	otolu	*egg*
126	paqoRu	ou-na	*new*
127	palu	paru	*to hit, strike*
128	pansi	pasi	*to split, cut*
129	mpatu	patu	*joint, node*
130	mpisi	pisi	*to fart*
131	mpoi	poi	*odor, smell*
132	popos	poso[39]	*to hold in hand, squeeze*
133	mpua	pua	*flower*
134	pupuŋ-an	puŋana	*roof ridge, ridgepole*
135	ndaRaq	rae	*blood*
136	ndam^{w}e	rame	*to chew*
137	ndamu	ra-ramu-ti	*lime spatula*
138	nsalaŋ	raraŋa	*sea urchin sp.*
139	lanse	rare	*coral limestone*
140	nsaRi	rari	*to rub, smear, anoint*
141	saRum	raum	*needle*
142	ndaula	raura	*frigate bird*
143	suRi	riu (< M)	*bone*
144	sosop-i	ropi *(to drink)*	*to suck, drink*
145	nsapa	saa	*what?*
146	nsake	sae, saesae	*to climb, upwards*
147	saqit	saik-i	*to sew (clothes)*
148	said-i-a	sair-i-a	*to split*
149	nsalan	salana	*path, road*

No.	POC	MUSSAU	ENGLISH
150	nsaman	samana	*outrigger float*
151	samuksamuk	samusamu *(to bite)*	*to chew, bite*
152	saŋa	saŋa-saŋa	*bifurcation, to branch*
153	sa-ŋa-puluq	saŋaulu	*ten*
154	ndondom	sau-rorom	*dark*
155	nsai[40]	sei	*who?*
156	esa	s-esa	*one*
157	suda	sila	*to comb*
158	sinaR	sinaka *(sun)*	*to shine*
159	nsipo	sio	*down*
160	nsiwa	sio	*nine*
161	nsoka	soa *(to shoot)*	*to stab, shoot*
162	sawan	soana	*channel, strait*
163	susuk-i	su-i	*to sew (mats, etc.)*
164	susud-i	sul-i	*to sew (mats, etc.)*
165	suluq	sulu *(to burn)*, u-sulu	*torch*
166	susu	susu	*breast*
167	suku	suu	*to bathe, dive*
168	ntaliŋa	taliŋa	*ear*
169	tama	tama	*father*
170	tamanu	tamanu	*a tree: Calophyllum sp.*
171	taŋiRi	taŋini	*a fish: Spanish mackerel*
172	tawan	taon	*a tree: Pometia pinata*
173	tapuRi	taue	*conch shell, triton*
174	taumataq	taumata	*person, human being*
175	tinaqe	tine	*intestines*
176	toka	toka	*to sit, squat; reside*
177	tolu	tolu	*three*
178	toŋoR	toŋo	*mangrove*
179	ntopu	tou	*sugarcane*
180	tumpu	tubu	*grandparent/grandchild*
181	tuka	tue	*elder sibling of same sex*
182	tudu/tuRu[41]	tu-tulu	*housepost*
183	puqaya	ua	*crocodile*
184	walu	ualu	*eight*
185	puaq	ue	*fruit*
186	kupʷena[42]	uena	*casting net*
187	uRat	ueta	*vein, vessel, tendon*
188	ikuR	ui (< M)	*tail*
189	kuRita	uita	*octopus*
190	pulaka	ulaa	*taro (Cyrtosperma sp.)*
191	pulan	ulana	*moon, month*
192	pudapuda	ulaula	*foam, bubbles*
193	kuluR	ulu	*breadfruit*
194	punti	uri	*banana*
195	qulu	uru	*head*
196	puso	usouso-ana	*white*
197	pulu	uu	*body hair, feather*
198	-Vna	-Vna	*attributive suffix*

NOTES

1. On all recent maps that I have been able to consult the name 'Mussau' (or 'Musau') is applied to the major island of the St. Matthias group. Nevermann (1933:17), however, calls this island 'St. Matthias' and reserves the name 'Musau' for an islet of 35 hectares lying between it and the reef island of Eloaua.

2. Dyen (1965:37, 41) regards Mussau as an isolate within the 'Austronesian Linkage' — that is, as a primary branch of the Austronesian language family. In view of the numerous phonological, lexical and grammatical innovations which Mussau shares exclusively with other Oceanic languages this classification can hardly be taken seriously.

3. To judge from the pattern for thousands, it is likely that alternative forms ka-teba-ai, ga-lua-ai, exist for *one hundred*, *two hundred*, etc. though these were not heard.

4. For a possessive construction which derives from a clausal source in another Austronesian language cf. colloquial Indonesian saya punya isteri *my wife* (lit. *I have a wife*).

5. It is unclear whether a-teba can function as a definite article, or whether it is neutral with regard to definiteness. The English translations must be regarded as convenient approximations.

6. Lister-Turner and Clark (1930) give e as a third person subject marker in Motu: (ia) e gini *he/she/it stands*, (idia) e gini *they stand*. As in Mussau, however, it has some uses which seem less straightforward: e hitologumu *I am hungry* (lit. *it hungers me*), e goreregumu *I am ill*, etc. The existence of similar systems of subject marking in various languages of eastern Indonesia suggests that the subject-marking function of Mussau, Motu e is old, and may have been transformed into an indefinite predicative function in Eastern Oceanic languages when the original system of subject marking broke down.

7. Interestingly, Chinnery (1927) records a 'reversed' genitive construction in Emira, as in ai-uruna (Mussau uru-ŋ-ai) *leaf*, ai-puana (pua-ŋ-ai) *blossom*, ai-viliki (biliki-ŋ-ai) *bark of a tree* and ai-oan (oa-ŋ-ai) *root of a tree*. While the structure of these constructions is generally whole + part + third person singular possessor, at least one compound that Chinnery cites contains an additional element -i which may mark the genitive: ai-lai-ina (Mussau laa-ŋ-ai) *branch of a tree*.

8. cf. Lister-Turner and Clark (1930:12) for a very similar situation in Hanuabada Motu (but not in 'Police' Motu).

9. Phonemically, -mu also occurs in /samusamu-a/ *to bite* and /alomu/ *parent-in-law*, but these items were recorded only in suffixed form. As will be seen, it is possible that the near-constraint against /u/ between /m/ and a following word boundary is not phonemic, but rather a product of low-level allophonic rules.

10. Chinnery frequently — but inconsistently — writes Emira v corresponding to Mussau /b/: bilik *skin*, ai viliki *tree bark* (Mussau /biliki/), valavala (/balabala/) *fence*, tuvui *grass*, tubui *wild* (probably both = Mussau /tubui/ *jungle*, *bush*).

11. Geminate r is a lengthened (5-6 tap?) trill.

12. In this connection we might also recall Milner's (1958) explanation of aspirated stops in Kapingamarangi and Tuvalu (Ellice) as deriving from earlier partial reduplications which presumably gave rise to historically intermediate geminates, much as the written geminates of Italian are realised in some colloquial varieties as voiceless aspirates. Haudricourt (1971:384) reports a similar situation in New Caledonia. To the extent that these changes agree, then, they may be regarded as exemplifications of a common phonological drift in Oceanic languages.

13. Certain exceptions remain, as with [pappánasa] *noon* next to [papápa] ~ [páppa] *shoulder*, [aanása] *hot*, and [amáamalo] *I am/was hungry*. These may be due to transcriptional error, and should be checked in future fieldwork on the language.

14. Reflexes of final *d were recorded only before a transitive suffix. No reflexes of final *l were recorded, but as POC *l is retained in non-final position, its retention in final position is expected.

15. Consonant grades in Appendix 1 follow Grace (1969), or earlier (mostly unpublished) Proto-Oceanic reconstructions of my own. The distinctions suggested here are attributed to a language of undetermined time-depth that can conveniently be called 'pre-Mussau'.

16. The reader is reminded that I write Milke's *nj as *ns unless it reflects PAN *(n)j. My *nj is the nasal grade of POC *j < PAN *j.

17. Parentheses indicate minor rules, or weakly attested reflexes; a/y and a/w are to be read as "*a adjacent to *y, *a adjacent to *w", as explained in 3.2.1.2.

18. cf. also lua *two*, ka-sa-ŋaulu-ga-lua *twelve*, etc. next to ga-lue-ŋaulu *twenty*.

19. However, note Pokao vinao, Tami pinau, Havannah Harbour binako *to steal*, cited by Milke (1968). Together with Mussau ainao these words could be taken as evidence for a POC doublet *pinako.

20. If, on the other hand, taon is /taono/ and derives from POC *tawan, some instances of *wa > o evidently preceded the addition of echo vowels.

21. P. = New Guinea Pidgin, E. = English. Many lexicalised phrases in Mussau are likely calques on New Guinea Pidgin (e.g. ateio talia = P. raunwara *lake*, tara kila = P. luksave *to recognise*, ubi e mate = P. kilim i dai *to kill*). Since the semantic structure of Pidgin is determined to a very large extent by its Austronesian component, however, some of these similarities may be due to common origin.

22. Although ai_1 and ai_2 clearly are distinct, the assignment of compounds to one rather than the other is often arbitrary, as a great many traditional implements are/were made of wood.

23. cf. Chinnery (1927) aliki *child*.

24. Said to be an Emira word.

25. Greeting? cf. alai *afternoon*, e lo alai *good afternoon*; Chinnery (1927) elo la *day*.

26. Initially misanalysed as ŋa. This error was caught after the vocabulary had been typed, hence the alphabetical anomaly.

27. Unless stated otherwise glosses are generally those attributed to the POC reconstruction.

28. Emira atama *door* suggests that Mussau atamana may be a morphologically complex reflex (atama-na) of a POC form which lacked the final consonant. However, Emira sala < *nsalan *path* shows that POC *-n was lost in some other bases. Kayan (Southwell 1980) katamen (variant: betamen) *door doorway* may be connected and so support the reconstruction of *-n, though the last vowel is problematic.

29. Tongan efu *dust*, assigned by Dempwolff to PAN *qabu, is now generally derived from POC *ndapuR. Mussau au shows that a reflex of PAN *qabu also survived in Proto-Oceanic.

30. Grace (1969) writes *pakiwak, basing himself on Capell (1943). The latter, however, derives the Oceanic terms for *shark* from 'Indonesian' *pa-iwak, on the apparently groundless speculation that reflexes of POC *pakiwa are cognate with Javanese iwak *fish*, Samoan faiva *fishing trip, fishing party*. To date no support for a final consonant in this form is known from any Oceanic language, and no cognates are known outside the Oceanic group.

31. Milke (1968) posits *mbuto (Grace: *mputo) *navel*, but several of the reflexes he cites (Tuna bito-no, Tongan pito) point instead to *mpito.

32. Pawley (1972:78) attributes Proto-Polynesian *fea and a few similar forms in languages of central and northern Vanuatu (Sesake, Motu vea) to Proto-Eastern Oceanic *pai *where?*, taking the distribution of the 'irregular' forms as evidence for a 'North Hebridean-Central Pacific' subgroup of Eastern Oceanic languages. Mussau ea, however, shows that *pea almost certainly was found in Proto-Oceanic.

33. Milke (1968) writes *giRam (Grace: *kiRam) *stone adze, axe*, but cites Meto II (Vitu Islands) kira *knife* among his reflexes. Together with this form Mussau iema can be taken as evidence that the meaning of *kiRam included *knife*.

34. Doublet *qanus-i; cf. Motu kanud-i *to spit, spittle*.

35. Probably a morphologically complex from of POC *mpempe; cf. Motu kaubebe idem.

36. If Mussau -laba is cognate with e.g. Roviana lavat-ana *great, large*, Nggela lava *great* (in compounds), Sa'a laha *big*, Trukese napa *big, large, great, principle, main* the lack of a final syllable -ta is unexplained. Only Trukese agrees in reflecting the nasal grade of *p.

37. Dempwolff (1938) assigned Tongan laka *go, walk, step* and similar forms in other Polynesian languages to PAN *laŋkaq *step, stride*. Motu raka *step, walk, go*, however, indicates a POC etymon with *d-.

38. Reconstructed in Blust (1978) as *moñak *fat; sweet*. Mussau mona *pounded taro with coconut milk* might be regarded as semantically too divergent to justify the proposed cognate association. This connection is made far more likely, however, by Gitua mona *sago*, Nggela mona *coconut cream*, i.e. *shredded coconut and salt water squeezed over food; tender, of food* (monamona); *greasy* and Sa'a mona tele *a dish made from taro*, which suggest that POC *moñak referred additionally to a *taro dish prepared with coconut cream*.

39. Possibly from POC *poRos *squeeze, wring out juice*. If so, however, the semantic fit is poorer, and the derivation violates the chronological ordering of CONTRACTION (2) and *R > Ø assumed in 3.2.4.

40. Proto-Oceanic may have had a doublet *nsei; cf. Pawley (1972:78), Tryon (1976:420ff).

41. Grace (1969) lists only *turu (my *tudu) *post*, but Aua u, Nauna tu *house-post* point instead to *tuRu.

42. Milke (1968) gives *gubeŋa (Grace: *kupeŋa) *fishing net*. Evidence for the doublet appears in Blust (1981a:244ff).

BIBLIOGRAPHY

BEAUMONT, C.H.

1972 New Ireland languages: a review. *PL*, A-35:1-41.

1976 Austronesian languages: New Ireland. In Wurm, ed. 1976:387-397.

BLUST, Robert

1974 Eastern Austronesian: a note. *Working Papers in Linguistics* 6/4:101-107. Honolulu: Department of Linguistics, University of of Hawaii.

1976 A third palatal reflex in Polynesian languages. *Journal of the Polynesian Society* 85:339-358.

1977a Sketches of the morphology and phonology of Bornean languages 1: Uma Juman (Kayan). *PL*, A-33:7-122.

1977b A rediscovered Austronesian comparative paradigm. *Oceanic Linguistics* 16/1:1-51.

1978 *The Proto-Oceanic palatals*. Memoir no. 43. Wellington: The Polynesian Society.

1981a Some remarks on labiovelar correspondences in Oceanic languages. In Hollyman and Pawley, eds 1981:229-253.

1981b Variation in retention rate among Austronesian languages. Paper presented at the Third International Conference on Austronesian Linguistics, Bali, January 19-24, 1981.

1984 Malaita-Micronesian: an Eastern Oceanic subgroup? *Journal of the Polynesian Society* 93:99-140.

CAPELL, Arthur

1943 *The linguistic position of south-eastern Papua*. Sydney: The Australasian Medical Publishing Company.

1971 The Austronesian languages of Australian New Guinea. In Sebeok, ed. 1971:240-340.

CHINNERY, E.W.P.

1927 Notes on the natives of E Mira and St. Matthias. *Territory of New Guinea Anthropological Report no.2,* 93-228.

DEMPWOLFF, Otto

1920 *Die Lautentsprechungen der indonesischen Lippenlaute in einigen anderen austronesischen Südseesprachen. Zeitschrift für Eingeborenen-Sprachen,* Supplement 2. Berlin: Reimer.

1934-38 *Vergleichende Lautlehre des austronesischen Wortschatzes. Zeitschrift für Eingeborenen-Sprachen,* Supplements 15 (1934), 17, (1937), 19 (1938). Berlin: Reimer.

DYEN, Isidore

1965 *A lexicostatistical classification of the Austronesian languages. International Journal of American Linguistics.* Memoir no.19 (vol.31, no.1).

GOODENOUGH, Ward H.

1963 The long or double consonants of Trukese. *Proceedings of the Ninth Pacific Science Congress, 1957,* 3:77-80.

GRACE, George W.

1969 A Proto-Oceanic finder list. *Working Papers in Linguistics* 2/3: 39-84. Honolulu: Department of Linguistics, University of Hawaii.

GREEN, R.C. and M. KELLY, eds

1972 *Studies in Oceanic culture history,* vol.3. Pacific Anthropological Records, no.13. Honolulu: Department of Anthropology, Bernice P. Bishop Museum.

HAUDRICOURT, André G.

1971 New Caledonia and the Loyalty Islands. In Sebeok, ed. 1971:359-396.

HOLLYMAN, Jim and Andrew PAWLEY, eds

1981 *Studies in Pacific languages and cultures in honour of Bruce Biggs.* Auckland: Linguistic Society of New Zealand.

KERN, H.

1886 *De Fidji-taal vergeleken met hare verwanten in Indonesië en Polynesië.* Verhandelingen der Koninklijke Akademie van Wetenschappen, afdeling Letterkunde, vol.16 N.S. (reprinted in *Verspreide Geschriften,* vol. 4:243-343, vol.5:1-141, The Hague, 1916).

LISTER-TURNER, R. and J.B. CLARK

1930 *Revised Motu grammar and vocabulary.* Port Moresby: Department of Information and Extension Services.

LITHGOW, David and Oren CLAASSEN

1968 *Languages of the New Ireland District.* Port Moresby: Department of Information and Extension Services.

MILKE, Wilhelm

1968 Proto-Oceanic addenda. *Oceanic Linguistics* 7/2:147-171.

MILNER, G.B.

1958 Aspiration in two Polynesian languages. *Bulletin of the School of Oriental and African studies* 21/2:368-375.

NEVERMANN, Hans

1933 *St. Matthias-Gruppe* (vol.2 of G. Thilenius, ed. *Ergebbusse der Südsee-Expedition 1908-1910)*. Hamburg: Friedrichsen, de Gruyter.

PAWLEY, Andrew

1972 On the internal relationships of Eastern Oceanic languages. In Green and Kelly, eds 1972:1-142.

SEBEOK, Thomas A., ed.

1971 *Current trends in linguistics,* vol.8: *Linguistics in Oceania*. The Hague: Mouton.

SOUTHWELL, C.H.

1980 *Kayan-English dictionary*. Marudi, Baram, Sarawak: privately printed.

TRYON, D.T.

1976 *New Hebrides languages: an internal classification*. *PL,* C-50.

WURM, S.A., ed.

1976 *New Guinea area languages and language study,* vol.2: *Austronesian languages*. *PL,* C-39.

Blust, R. "A Mussau vocabulary, with phonological notes". In Ross, M., Siegel, J., Blust, R., Colburn, M. and Seiler, W. editors, *Papers in New Guinea Linguistics No. 23*. **A-69:159-208**. Pacific Linguistics, The Australian National University, 1984. DOI:*10.15144/PL-A69.159*

THE FUNCTIONS AND MEANINGS OF THE ERIMA DEICTIC ARTICLES

Michael A. Colburn

1. INTRODUCTION

1.1 Location

The Erima language is spoken in an area along the coast south of the town of Madang in the Madang Province of Papua New Guinea. The language area starts approximately ten miles south of Madang town and comprises four villages located between the Gogol and Yawor Rivers. The four villages are in an area approximately four miles long and four miles wide. Speakers number approximately 500. Three villages, Garima (also called Mariga), Dogia, and Balama are a part of the Ambenob Council of the Madang District, while the fourth village, Erima, is a part of the Astrolabe Bay Council of the Madang District. See Figures 1-2.

1.2 Classification of the language

Erima is a non-Austronesian language classified by Z'graggen (1975:3) as a Trans-New Guinea language of the Madang-Adelbert Range Sub-Phylum, belonging to the Madang Superstock. The Madang Superstock is composed of two stocks: the Rai Coast Stock and the Mabuso. Erima belongs to the former. The Rai Coast Stock consists of six families, Erima being a member of the Nuru family. Within the family, Erima's closest neighbour both geographically and linguistically is the Uya language. The cognate percentage between the two has not yet been determined although informal observation suggests it is high. The name Erima is given to the language following Z'graggen. The people, however, have traditionally called their language Ogia. All adult Erima and most children are bilingual in Tok Pisin, the main trade language of Papua New Guinea.

1.3 Fieldwork

Data for this paper were gathered during some twenty-six months in the field between 1977 and 1981 under the auspices of the Papua New Guinea branch of the Summer Institute of Linguistics, which is under contract with the Papua New Guinea Department of Education. Approximately fifty pages of text were

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Pacific Linguistics, A-69, 1984.

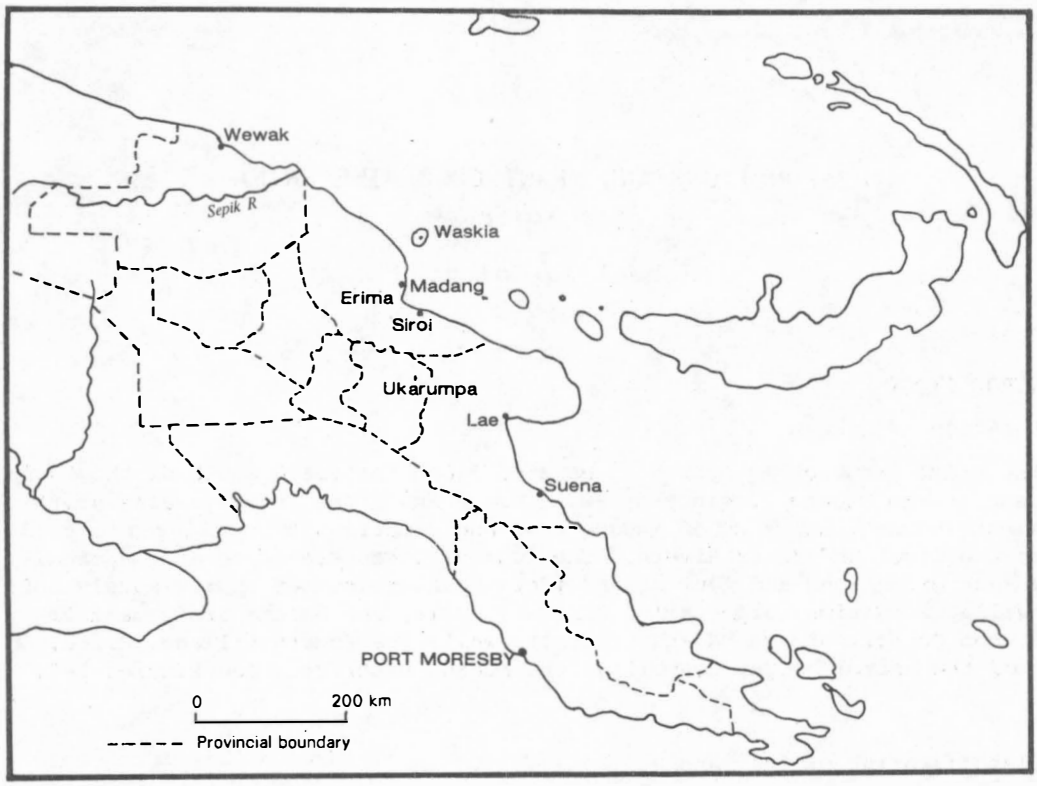


Figure 1. Papua New Guinea

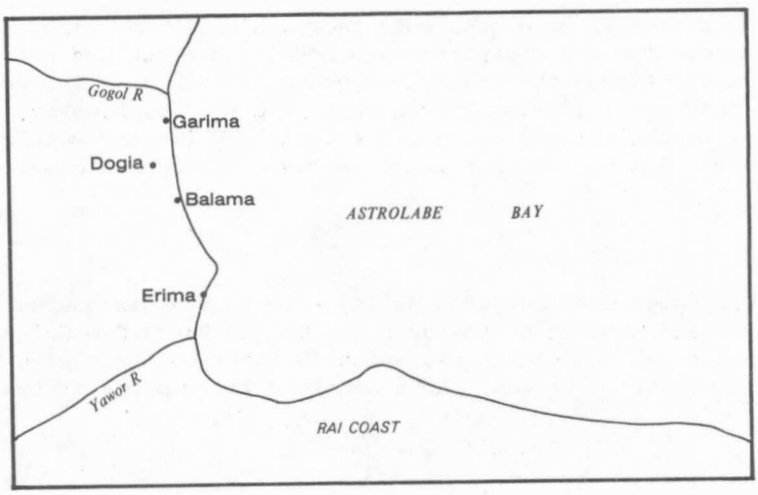


Figure 2. Erima-speaking villages

used for the study as well as numerous elicited utterances. This study is mainly based on the Erima dialect of the Erima language. Main language assistants were Sioba and Abaro Ura of Erima village and Kelebai Iriwai of Dogia village.

1.4 Aim of the study

This study grew out of the need to come to grips with the functions and meanings of the Erima deictic articles. As initial study of the language was undertaken, the three deictic articles be, wa, and wo were found to occur in a bewildering variety of contexts. They were seen to function as locatives, demonstrative pronouns, relativisers, topic markers, conditional markers, and as conjunctions in various inter-clausal logical relationships as will be seen in section 2. A statistical concordance produced by the computer department of the Papua New Guinea Branch of the Summer Institute of Linguistics revealed that apart from the third person pronouns, the deictic articles appear more frequently in text than any other free morphemes.

The aim of the study, therefore, is to attempt to discover the functions and meanings of the Erima deictic articles, and to provide an explanation of the reason for such apparently widespread uses and functions. The achievement of this goal necessitates examining other topics such as definitivisation, relativisation, and topicalisation. I intend to show that the apparent vast variety of functions and meanings of the Erima deictic articles is best explained from a topic-comment perspective, with the realisation that what is in fact involved is the topicalisation of definite NPs.

The study is divided into three main parts. Sections 2 and 3 define the nature of the problem by the examination of the Erima data and the analyses done on related languages. The second part, sections 4 and 5, concern the explanation of the true function of the deictic articles. Section 4 looks at the insights of two linguists working on languages of Papua New Guinea, while section 5 is my own explanation. In section 6, the discourse functions of the deictic articles are discussed. And finally, in section 7 an attempt is made to classify Erima according to the typology proposed by Li and Thompson (1976), namely topic-prominent versus subject-prominent languages.

2. THE DATA

In this section I present the etic data regarding deictic articles in Erima. The purpose of the section is to provide the reader with a feel for the various contexts in which the deictic articles appear, and the possible glosses in each context.

2.1 The deictic articles as locative

For the casual observer of speakers of Erima, one of the most obvious functions of the three deictic articles is seen to be that of locating objects in the physical environment. (1) below is an example of a deictic article uttered as an independent utterance in the context, for example, of someone handing an object to another person:

(1) be. *Here.*

Or, an inquiry as to where an individual is sitting might have the response of either (2) or (3):

(2) wa la
there at
(Over) there.

(3) wo la
there at
(Over) there.

The difference in meaning between the three deictic articles involves the distance of the object referred to from the speaker. An object located near the speaker is referred to by use of be, one a mid-distance from the speaker by wa, and an object which is far from the speaker is referred to by use of wo. Therefore, wa is glossed as *there* (a mid-distance) and wo as *there* (a far-distance).

Grammatically, the deictic articles as locative occur as complete utterances, or as fillers of the axis slot of locative axis-relator phrases as was seen in (2) and (3).

2.2 The deictic articles as demonstrative pronouns

As demonstrative pronouns, the deictic articles have the meanings of *this*, *that* (mid-distance), and *that* (far-distance) as in (4)-(6):

(4) fai be-fa Madang man-o-na
man this-emp *Madang go*-fut-3sS
This man will go to Madang.

(5) fai wa-fa ala goita?
man that-emp *where go*-3sS.ip
Where did that man (mid-distance) *go?*

(6) fai wo-fa wa la yaf-o-na.
man that-emp *there at sit*-fut-3sS
That man (far-distance) *will sit there* (mid-distance).

The deictic articles in their function as locatives do not occur with the emphatic clitic -fa, but in their function as demonstrative pronouns they optionally take -fa as seen in a comparison of (5) and (7):

(7) fai wa ala goi-ta?
man that where go-3sS.ip
Where did that man go?

Although I have glossed -fa as 'emphatic', I do not yet know its true function and meaning.

Another possibility of a gloss for the deictic articles in the last few examples is that of 'the' since Erima does not have a definite article. Erima speakers with a knowledge of English will sometimes translate the deictic articles as 'the', or when asked to translate into Erima the English sentence Where did the man go? will give (7).

The above examples of the deictic articles functioning as demonstrative pronouns are all cases of their filling the determiner slot of noun phrases.

The deictic articles may also occur as clause level constituents when they fill the subject or object slots of clauses as in (8) and (9):

(8) wa-fa yame mata la inyi-Ø-na.
that-emp *my house at be*-pr-3sS
That (thing) is at my house. It is at my house.

(9) ji wa-fa ur-ei uwa
I that-emp *see*-nom *not*
I did not see that.

Notice that in both of the above examples, it would be more natural to translate wa as *it*. Indeed, there is no third person pronoun in Erima that corresponds to the English 'it' except for the deictic article.

At this point it will perhaps be helpful to summarise the two functions to the deictic articles seen thus far, and compare them to English, as well as give an explanation of why be, wa, and wo are being termed deictic articles. Much of the material at this point is the fruit of examining the Erima deixis system in light of Lyons' (1977) discussion of deixis, space, and time. (cf. Lyons 1975). His insights into the semantics of deixis are very relevant to Erima and have been most helpful.

As is commonly stated in general linguistic works, the terms deictic and deixis derive from the Greek word deiktikos meaning *pointing*. Lyons (1977:637) states that

> ... by deixis is meant the location and identification of persons, objects, events, processes and activities being talked about, or referred to, in relation to the spatiotemporal context created and sustained by the act of utterance and the participation in it, typically, of a single speaker and at least one addressee.

According to Lyons, current linguistics discusses under the heading 'deixis' the functions of personal and demonstrative pronouns, the definite article, and some other features of language such as tense. The term 'demonstrative' also has the meaning of pointing. Lyons (1977:636) identifies our English term 'demonstrative' as deriving from the Latin word demonstrativus which was the term used by Latin grammarians to translate the Greek grammarian term deiktikos. Thus we see the common derivation of the current English terms deixis, deictic, and demonstrative.

The next point made by Lyons (1977:636) will be quoted in full as it sheds light on the Erima deictics:

> It is worth noting that we now call demonstrative pronouns were referred to as deictic articles in the earlier Greek tradition and that the Greek word 'arthron', from whose Latin translation, 'articus', the technical term article derives, was no more than the ordinary word for a link or joint. It was only in the later tradition that the Greek equivalent of 'pronoun' was used; and this fact is of some significance. The point is that in early Greek, no sharp distinction can be drawn, in terms of their forms or syntactic and semantic function, between demonstrative pronouns, the definite article, and the relative pronoun: the term 'article' was at first applied to them all, and it was chosen presumably, because they were regarded as connectives of various kinds.

From Lyons' observations it may be seen that in early Greek linguistics the demonstrative pronouns, the definite article, and the relative pronoun were all seen together as forms with a pointing (deiktikos) and linking (arthron) function.[1] This, in fact, fits Erima quite well. Should wa be described on the one hand as a locative, and on the other as a demonstrative pronoun? Should it be considered a definite article as well as a third person pronoun (i.e., *it*)? Wa also functions in a sense, as it will be seen, as a relative pronoun as well. Early Greek grammarians had the insight that all of these grammatical categories are related and that the forms in the Greek could be viewed as deictic articles, or *pointing links*. That is, forms which point by giving the location or identification of 'persons, objects, events, processes and activities' and then link them into the grammatical and textual context in which they occur. The Erima be, wa, and wo, therefore, will be termed *deictic articles*, with the term deictic article being defined as designating a lexeme with the function of 'pointing out' a person, object, event, or idea talked about by locating it in space or time or 'identifying' it, and then relating it or linking it to its grammatical and textual context.

This concept of deictic articles is not simply a convenient cover term to describe part of Erima grammar. In fact, Lyons argues that what we are concerned with is an underlying semantic structure, a sort of semantic universal concerning person-deixis. He notes (1977:646) that in both Germanic and Romance languages the definite article and the third person pronouns historically derived from the demonstrative pronoun.[2] In fact, in English we can see the same sort of connection. What are the similarities and differences between *here, this,* and *the* in English? The point of similarity is that all are marked for definiteness. *Here* and *this* are additionally marked for proximity. Lyons states that *this book* means 'the book (which is) here' or 'the book (which is) near the speaker'. The English definite article, however, is marked only for definiteness, not for proximity. Figure 3 shows a feature matrix for the Erima surface forms which encode the semantic features covered by the corresponding English surface forms. The English feature chart is not meant to be exhaustive, but to show some of the features incorporated in the English person-deixis system. Lyons (1977:647), after a section of argumentation concludes that

> ... looked at from a diachronic point of view, then, the definite article in English is a demonstrative pronoun marked for gender and number, and the third-person personal pronouns are demonstrative pronouns, distinguished with respect to gender and number, but, like the definite article unmarked for proximity.

Lyons (1968:278) points out that the notion of proximity and person are not usually connected in the analysis of demonstrative pronouns. That is, the semantic component of proximity should be defined in terms of person. Person is normally viewed as having three semantic categories, namely first, second, and third person. This, in English, is defined as 'near the speaker' and could be thought of as a first person demonstrative pronoun. In the case of *that*, in English, the categories of second and third person are neutralised. Lyons refers to Latin and Turkish as examples of languages with a three-person distinction in the demonstrative pronouns. The Latin hic and the Turkish bu correspond to the English *this* and are first person demonstrative pronouns. That is, they may be defined as 'proximate to the speaker'. The Latin iste and the Turkish su correspond to *that* but are second person (i.e., 'proximate to the hearer'.). The third person demonstrative pronouns are ille for Latin, and o for Turkish and mean *remote from the speaker and the hearer.*

Figure 3: Feature matrix for part of the English person-deixis system showing those features monitored

Grammatical Class	Form	Semantic features monitored			
		Proximity	Definiteness	Number	Gender
Demonstrative adjectives	here	marked	marked	unmarked	unmarked
	there	marked	marked	unmarked	unmarked
Demonstrative	this	marked	marked	marked	unmarked
	that	marked	marked	marked	unmarked
	these	marked	marked	marked	unmarked
	those	marked	marked	marked	unmarked
Definite article	the	unmarked	marked	unmarked	unmarked
Third person personal pronouns	he	unmarked	marked	marked	marked
	she	unmarked	marked	marked	marked
	it	unmarked	marked	marked	marked
	they	unmarked	marked	marked	unmarked

Figure 4: Feature matrix for part of the person-deixis system for Erima

Grammatical Class	Form	Semantic features monitored			
		Proximity	Definiteness	Number	Gender
Deictic articles	be	marked	marked	unmarked	unmarked
	wa	marked	marked	unmarked	unmarked
	wo	marked	marked	unmarked	unmarked
Third person personal pronouns	no	unmarked	marked	marked	unmarked
	nere	unmarked	marked	marked	unmarked

Form	Meanings
be	*here, this, these, the*
wa	*there, that, those, the, it*
wo	*there, that, those, the, it*
no	*he, she*
nere	*they*

This same sort of system has already been noted for Erima. Be could be viewed as the first person deictic article, wa the second, and wo the third.

In summary, we have seen that in many Indo-European languages (i.e., Germanic and Romance languages) demonstratives are basic and that the definite article and the third person pronouns historically derived from the demonstratives.

2.3 Overview of Erima clause and sentence structure

It may have already been noticed by the reader that Erima is a SOV language. Generally, tagmemes such as location, time, instrument, etc., occur following the subject tagmeme and always before the predicate. (cf. Colburn 1979 for a description of Erima grammar from morpheme to clause levels.) Erima is typical of many non-Austronesian languages of Papua New Guinea in that it may be classified as a *clause chaining* language. (For a detailed description of such languages see Longacre 1972, and for a description of clause chaining in another New Guinea language see Anderson 1976:13-14.)

In Erima, and other clause chaining languages, prominence is given to the predicate of a clause. Although such clause level tagmemes as subject and object are considered nuclear to Erima clauses, they are not obligatory. The only obligatory tagmeme of the clause in Erima is that of predicate. Typically a sentence may consist of a string of perhaps five or six predicates with very few subject, object, or other clause level tagmemes. Another feature of these chains of clauses is that there is a distinction made between *medial* and *final clauses*. Unless embedded, the verbs of clauses which occur before the final clause of a sentence take medial form suffixation. Thus the basic structure of sentences formed by clause chaining may be formulated as:

(10) $\pm$ (Medial Cl)^{n} + Final Cl

In addition, medial verb suffixes are classified as to whether they are *endocentric* or *exocentric*.[3] Endocentric suffixes are those suffixes which relate to the clause internally. They include causation, object, benefactive, aspect, tense, and subject person-number. Exocentric suffixes relate to outside of the clause, that is, to the clause following. There are two types of exocentric suffixes, expressing two types of inter-clausal relationships: time sequence between clauses, and subject co-reference. These exocentric suffixes will be explained more fully below. The final clause of a sentence has a verb inflected with final verb suffixes. A final verb has endocentric suffixes, and differs from medial verbs in that it does not have exocentric suffixes. In addition, medial verb suffixes indicating tense and subject person and number differ from those of final verbs.

The endocentric suffixes of medial verbs are illustrated as follows. Time sequence suffixation depends on whether the actions of two clauses occur simultaneously (termed *temporal overlap* and abbreviated as TO) or sequentially (termed *temporal succession* and abbreviated as TS). In temporal overlap, the actions of the two clauses overlap in time as in (11):

(11) M Cl (no da nyi-bona-Ø) F Cl (yaf-a-i)
he food eat-TO-SR *sit*-rp-3sS
He ate food as he sat.[4]

In temporal succession the action of the preceding clause is completed before

the action of the following clause occurs, as in (12):

(12) M Cl (no da nyi-du-Ø) F Cl (yaf-a-i)
he food eat-TS-SR *sit*-rp-3sS
He ate, then sat down.

The second type of exocentric suffixes are those indicating whether or not the subject of a medial clause is coreferential with that of the clause following it. Coreferentiality is indicated by a zero morpheme. If the subject referents differ, the suffix -nga (*different referent marker*) occurs indicating that the subject referent of the clause it occurs in is different from that of the clause following it. In other words, the first verb indicates whether the second verb has a coreferential subject. (11) and (12) above are examples of a clause which is coreferential with that of the clause following it. In the examples, SR indicates 'same referent follows' and DR indicates 'different referent follows'. (13) below shows two clauses (i.e., the first and second) which are not coreferential and two clauses (the second and third) which are:

(13) fai ete goi-g-a-i-nga nomo gauna fere taga-du-Ø
man a go-TO-rp-3sS-DR *his dog also follow*-TS-SR

goy-a-i
go-re-3sS
As a man went along, his dog, having followed him, also went.

To show more clearly the function of same versus different referent suffixes, consider the English sentence (14):

(14) He saw him, then he ran away.

Out of context, we cannot tell whether the subject pronoun of the clause containing the verb saw is coreferential with the subject pronoun of the second clause (containing the verb ran). Who ran away, the one who saw, or the one who was seen? We cannot tell. Because of same versus different referent suffixes in Erima, there are two translations of (14) possible into Erima, i.e., (15) and (16):

(15) no ure-du-Ø faga-wa-i.
he see.him-TS-SR *run.away*-rp-3sS
He$_i$ *saw him*$_j$*, then (he*$_i$*) ran away.*[5]

(16) no ur-Ø-a-i-nga faga-wa-i
he see.him-TS-rp-3sS-DR *run.away*-rp-3sS
He$_i$ *saw him*$_j$*, then (he*$_j$*) ran away.*[6]

Erima does not have the type of ambiguity seen in (14). Speakers are obligated by the grammar to explicitly state whether the subjects of the two clauses are coreferential or not. It is also possible for a medial same referent clause to be manifested as a verb root less suffixation. (For an example see (137) in section 6.2).

Beekman and Callow (1979:45) state that semantically all units of communication may be classified as being in one of two types of relationships to other units. Units which are of equal prominence are said to be in an *addition* relationship, whereas those of unequal prominence are in a *support* relationship. This usually corresponds to the grammatical categories of coordinate versus subordinate relationships, although skewing often occurs between deep and surface structures. As in the Usan language (Reesink 1978), Erima makes use of clause chaining (i.e., medial verb suffixation) as the syntactic device for

combining clauses into a coordinate relationship. That is, they encode prepositions in the semantic relationship of addition. Halliday and Hasan (1976:222), as noted by Reesink (1978:1), state that a clause complex (i.e., two or more clauses directly related in structure) will be in either a *paratactic* or *hypotactic* relationship. (These terms paratactic and hypotactic correspond to the terms coordinate and subordinate.) They state that clauses which are in a paratactic relationship have equal status and those in a hypotactic relationship have unequal status. This parallels the statement of Beekman and Callow above regarding relationships between communication units. Halliday and Hasan (1976: 222) state that in a paratactic clause complex 'the relevant paratactic relation is that of coordination, i.e., 'and' and 'or' as well as apposition and quotation. Erima clause chaining encodes the coordinate 'and' relationship. Halliday and Hasan go on to define the three hypotactic types of relationships as: 'CONDITION (expressed by clauses of condition, concession, cause, purpose, etc.), ADDITION (expressed by non-defining relative clause) and REPORT'. It will be seen that the syntactic relationship of subordination (i.e., the paratactic relation) is often accomplished in Erima by constructions involving the deictic articles. That is, propositions or propositional clusters in an addition relationship are syntactically encoded by clause chaining devices (i.e., medial exocentric suffixes), whereas the relationship of support is encoded by constructions which usually have the deictic article as a constituent.

2.4 The deictic articles with relative clauses

I now turn to the function of deictic articles as a constituent of constructions encoding the syntactic relation of subordination. The first notable occurrence involves relative clauses as in (17):

(17) F Cl (ji F Cl (fai wa yaure-Ø-na) wa bolou
I man that yell-pr-3sS *that voice*

is-o-ne bo-ne)
hear-f-1sS *intent*-1sS
I want to hear (the) voice (of) that man (who) is yelling.

There are two things to note about relative clauses in Erima that may be seen from (17). A comparison of (17) with (18)

(18) fai wa yaure-Ø-na
man that yell-pr-esS
That man is yelling.

shows that in Erima when a clause is embedded, the clause structure is unchanged from its independent form as in (18). The order of the clause constituents remains identical, and the suffixes of the verb remain the same. Secondly, note that the embedded clause appears as a final form clause even though it is medial. In fact, no unassailable example of an embedded medial clause has been found to date. It may be claimed that clauses, as such, do not embed in Erima, but rather, sentences embed, since all embedded clauses derive from a sentence. A sentence in Erima is defined as a final form clause plus final intonation and pause. More will be said regarding relative or embedded clauses in Section 5. In (17) above, the deictic article wa occurs after the embedded clause. It is possible to have be or wo occur as well, but be and wo are generally used only in situations where the referent may be physically pointed out. As this is not normally the case, wa occurs much more frequently. This has to do with exophoric versus endophoric reference as will be discussed in section 6.1.

2.5 The deictic articles as topic markers

The deictic article often appears to mark an NP as topic as in (19):

(19) fai wa ji no ur-ei uwa
man that I him see-nom *not*
That man (topic), *I did not see him.*

or a clause as topic as in (20):

(20) F CL (ji mini-ne-fa) wa
I go.down-1sS-CA *that*

M Cl (no buriga elege-Ø-ta-nga)
he buriga gather-TS-ip.3sS-DR

F Cl (ure-ne-fa)
see.him-1sS-CA
(Regarding my) going down, he had gathered buriga (fish) and I saw him.

It is difficult to adequately translate (20). The sense of it is *I am talking about how I went down to the beach, and what I have to say about that is that he had gathered buriga fish and I saw him.*

2.6 The deictic articles as connectors of clauses in various logical relationships

The deictic article wa also occurs as a connector of clauses or sentences which are in various logical relationships such as adversative, content-reporting, reason-result, result-reason, purpose-means, grounds-conclusion, and condition-consequence.

2.6.1 The deictic articles as adversative markers

In this function, the deictic article appears to have the meaning of 'but' as in (21) and (22):

(21) ji min-e-ne wa ji no ur-ei uwa
I go.down-rp-isS *that I him see.him*-nom *not*
I went down, but I did not see him.

(22) nere hepos bagu wa ada goi-goi-Ø-de
they aid-post with but not go-go-pr-3pS
They have an aid post, but they don't habitually go there.

Another possible translation of wa in (22) is *although*, in which case sentence (22) would mean *Although they have an aid post, they don't go to it.*

2.6.2 Content-reporting

Clauses, or semantically speaking, propositions or propositional clusters which are in a content-reporting relationship involve verbs of perception such as alai *know*, isi- *hear*, and ure- *see*. The first proposition reports the content of the second proposition. In each case, the units are connected by the deictic article wa as in (23), (24), and (25):

(23) F Cl (no ala goi-ta) wa-fa F Cl (ji alai)
he where go-ip.3sS *that*-emp *I know*
I know where he went.

(24) F Cl (no ala goi-ta) wa-fa
he where go-ip.3sS *that*-emp
F Cl (ji isi-ne-fa)
I hear-1sS-CA
I heard where he went.

(25) F Cl (no ala goi-ta wa-fa
he where go-ip.3sS *that*-emp
F Cl (ji ure-ne-fa)
I see-1sS-CA
I saw where he went.

2.6.3 Reason-result

When propositions are joined together in a reason-result relationship, the clause stating the reason is joined to the one stating the result by a conjunction composed of the deictic article wa and bo- which means *for*. The root bo- always occurs with a personal pronoun suffix which is in agreement with the person and number of the clause it precedes. Recalling that wa can mean either *that* or *there*, it is interesting to note that wa and bo- together can literally be translated as *therefore*. In examples (26) and (27), the deictic article and bo- are seen in their function of conjoining propositions in a reason-result relationship:

(26) F Cl (no taura t-a-i) wa bo-na
he sickness get-rp-3sS *there for*-3sS
F Cl (no um-a-i)
he die-rp-3sS
He got sick, therefore he died.

(27) F Cl (no m-ei uwa) wa bo-ne
he come-nom *not there for*-1sS
F Cl (ji yaf-ei uwa)
I sit-nom *not*
He did not come, therefore I did not stay.

2.6.4 Result-reason

The logical relationship of result-reason is composed of two propositions combined with a conjunction composed of either (28) or (29):

(28) wa taate bo- *because*
that what for
wa taate hugu bo- *because*
that what reason for

Note from (30) and (31) that in order to ask the reason for something happening, the same construction is used as was in (28) and (29):

(30) taate bo-na // *Why? Why did he/it?*
what for-3s

(31) taate hugu bo-na // *Why?*
what reason for-3s

However, when the same construction occurs with the deictic article as a conjunction meaning *because*, falling intonation and pause occur only at the end of the sentence, that is, at the end of the second (i.e., reason) proposition as in (32) and (33):

(32) F Cl (no um-a-i) wa taate bo-na /
he die-rp-3sS *that what for*-3s

F Cl (no taura t-a-i) //
he sickness get-rp-3sS
He died because he got sick.

(33) F Cl (ji yaf-ei uwa) wa taate hugu bo-na /
I sit-nom *not that what reason for*-3s

F Cl (no m-ei uwa) //
he come-nom *not*
I did not remain because he did not come.

2.6.5 Purpose-means

Two propositions in a purpose-means relationship are joined together again by a conjunction formed optionally with the deictic article and obligatorily with bo- *for*, as in (34) and (35):

(34) Nominalised Cl (no hilou yaf-einomo)
he good sit-nom

wa bo-na F Cl (taura mata goy-a-i)
that for-3s *sick house go*-rp-3sS
He went to the hospital in order to get well.

(35) Nominalised Cl (no da tau-weinomo)
he food plant-nom

bo-na (haga goy-a-i)
for-3s *garden go*-rp-3sS
He went to the garden in order to plant food.

Note that in these constructions the first proposition is encoded by a nominalised clause. Also note that in order to translate the sentences back into English, the propositional order is reversed to means-purpose.

2.6.6 Grounds-conclusion

The logical relationship of grounds-conclusion uses the same conjunction as reason-result or purpose-cause, with the deictic article being optional:

(36) F Cl (nomo ima inyi-Ø-na)
his fishing.pole be-pr-3sS

wa bo-na F Cl (no laanga min-ei uwa)
there for-3s *he beach go.down*-nom *not*
His pole remains, therefore he did not go to the beach.

Sentence (36) would be uttered in the context of some people going to a man's house. They wonder if he is at home or if he has gone fishing down at the beach. As they approach the house, they notice that his fishing pole is hung up outside, so they conclude that he has not gone to the beach since they know that he would not go without his pole.

2.6.7 Condition-consequence

The condition-consequence relationship may be broken into three types: argumentative, future oriented, and non-future oriented (i.e., hypotheticality).

2.6.7.1 Argumentative condition-consequence

At first glance this does not appear to differ from grounds-conclusion:

(37) F Cl (nomo ima inyi-Ø-na) wa
his fishing.pole be-pr-3sS *if*

F Cl (no yafa-Ø-na)
he sit-pr-3sS
If his pole remains (is here), then he is here.

However, (36) differs from (37) in two significant respects. In (37) the deictic article is obligatory and bo- cannot occur. If bo- did occur, the meaning would be changed from *if his pole is here*, or *since his pole is here*. They also differ as to when they can be uttered. (36) could only be uttered upon arrival at the person's house and having already actually seen the pole, whereas (37) could be uttered either before arrival or afterward.

2.6.7.2 Future oriented condition-consequence

The logical relationship of future oriented condition-consequence again involves two clauses linked by the deictic article with the meaning of 'if'. Both clauses, of course, must have future tense verbs as in (38):

(38) F Cl (yaage m-o-na) wa
rain come.down-f-3sS *if*

F Cl (ji ada m-o-ne)
I not come-f-1sS
If rain comes, I will not come.

Note that this contrasts with (39) in which the same two propositions are encoded using the clause chaining syntactic device, producing a coordinate relationship:

(39) M Cl (yaage me-g-o-Ø-nga)
rain come.down-TO-f-esS-DR

F Cl (ji ada m-o-ne)
I not come-f-1sS
When rain will come, I will not come.

(39) has another possible translation, namely, *If rain comes, I will not come.* Compare (39) with (40) in which it is seen that the condition-consequence interpretation of (39) is purely from semantic grounds and is not syntactically signalled:

(40) M Cl (nere Irima matane yafa-g-o-nga)
they Erima village sit-TO-f-DR

M Cl (ji Dogia goy-o-ne bo-ne)
I Dogia go-f-1sS *intent*-1s
While the Erima people remain in their village, I will go to Dogia (village). or
The Erima people will remain at their village and I will go to Dogia.

A condition-consequence reading for (40), although possible, is rather unlikely, whereas it is very likely for (39) and the only reading possible for (38). Granted that semantically the first proposition in (39) and (40) is subordinate to the second, the syntactic structure, however, is coordination via clause chaining. This contrasts with (38) in which the clauses are not chained (i.e., are not a medial plus final clause string monitoring temporal overlap versus succession, and same versus different referent), but rather two final clauses are combined in a subordinate relationship both syntactically and semantically by the deictic article.

2.6.7.3 Non-future oriented condition-consequence

In the non-future condition-consequence relationship, hypotheticality is encoded as in (41):

(41) F Cl (yaage m-age) wa
rain come.hypo.3sS *if*

F Cl (ji yaf-ege)
I sit-hypo.1sS
If rain had come, I would have remained.

2.7 Conclusion

In this section examples have been given of the deictic articles as they occur in various constructions. It has been seen that they occur as locatives, definite articles, demonstrative pronouns, the third person singular non-human pronoun, topic markers, adversatives, relativisers, and as conjunctions in various logical interclausal or interpropositional relationships. This section

has merely been a survey to provide the reader with a feel for the data. For this reason an elaborate explanation of the deictic articles in each context has not been given. Before attempting an explanation of what is really happening with the Erima deictic articles (section 5), we turn to a look at how other linguists have analysed the deictic articles in some other languages of Papua New Guinea.

3. ANALYSIS OF OTHER NON-AUSTRONESIAN LANGUAGES

This section takes a brief look at three other non-Austronesian languages of Papua New Guinea. In each of these languages the deictic articles have functions similar to those shown for Erima in section 2. A survey made by Ger Reesink of the Summer Institute of Linguistics in Papua New Guinea, indicates that many other languages of the country also have this feature (personal communication). Time and availability of data restrict the present section to a brief look at Siroi, Waskia, and Suena. The purpose of the section is to present previous analyses made of the deictic articles in other languages for purposes of discussion in later sections.

3.1 Classification of the three languages

Two of the languages, namely Siroi and Waskia, are also located in the Madang Province (cf. figure 2, p.210). Siroi is spoken only some fifteen miles from Erima, in the Rai Coast area. Waskia is more distant, being located on Karkar, a volcanic island about seventy miles from Erima. Z'graggen (1975) identifies both Siroi and Waskia as belonging to the Madang-Adelbert Range Sub-Phylum of Trans-New Guinea languages, as is Erima. Siroi and Erima both belong to the same super-stock (i.e., the Madang Super-Stock) and the same stock (i.e., the Rai Coast Stock). They differ, however, in that Erima belongs to the Nuru family, and Siroi to the Kabenau family. Waskia, on the other hand, belongs to a different super-stock than Siroi and Erima, namely the Adelbert Range Super-Stock. The third language to be examined, Suena, is also a Trans-New Guinea language, but a different stock (Binandere) and is located in the Morobe Province of the country.

3.2 Siroi

The data presented for the Siroi language are from Wells (1979). Siroi has two basic demonstratives, te meaning *this*, and ta meaning *that*. An examination of Wells' writeup of the Siroi grammar reveals that ta also has many other meanings and functions according to her analysis.

3.2.1 Ta as a conjunction

In her section on conjunctions (1979:16), ta by itself is said to be a conjunction meaning *if*, *when*, *but* and is a link in sentence margins. In conjunction with -nu it is a conjunction meaning *therefore* and is a link in corollary sentences. nde plus ta is said to be a conjunction meaning *if* and is the link in a conditional sentence.

3.2.2 Te and ta as demonstratives and locatives

As noted above, te and ta as deictic demonstratives (Wells' terminology) mean *this* and *that*. The addition of the specific clitic -nge changes the meaning of te to *here* and presumably the meaning of ta to *there*. (See Wells 1979:20.)

3.2.3 Ta as an included (relative) clause marker

Wells (1979:73) states that embedded clauses, or as she has called them, included clauses, are independent clauses marked as being embedded by the postponed demonstrative ta as in (42):

(42) O(O S P) P
am ruga-nge ngayo-ng-ina ta minya-ng-ina
eye mud-spec *ruin*-cm-3s.pa *that wash*-cm-3s.pa
She washed the eye which the mud had injured.

3.2.4 Ta as linkage in corollary sentences

Wells (1979:104) states that "the link between the Bases of the Corollary sentence is the demonstrative ta *that* or the demonstrative ta plus the nominaliser -nu. When the sentence encodes circumstance tanu is used, and when it encodes frustrated modality ta is used". She also says that when the corollary sentence encodes circumstance, ta-nu means *so/therefore*, as in (43):

(43) B1
ndinsuku ngakmba Anut nu wamdus piro kareng-k-a
ways all God he thought work hard-cm-dep

Li B2
te-sili-k-ina tanu kile sile tanu mbol-nge
take-find-cm-3s.pa *that now we that on-*

mayok ka-kik
outside go-1d.ip
God thought hard to find ways (of helping) and now therefore as a result we benefit.

When encoding "conditionality with a universal quantifier" she says that ta or tanu means *whenever* (1979:106) as in (44):

(44) B1
ambonga tambun mbol te-nge ngakmba min-it
first moon on here-spec *all be*-3s.pr

Li B2
tanu sine wamdus kugatok ake min-eg
that we thought without nothing be-1p.pr
Whenever the moon is full we do not think (about) catching (whitebait).

Regarding hypotheticality she states that "in this encoding Link, ta/tanu has the meaning *if*". (Wells 1979:108). One of her examples is:

(45) B1 Li
andde nu minge dubi nda-wa ta
one he mouth follow neg.3s.po *that*
B2
nu kalabus mbol ka-ngat
he jail on go-3s.fu
If one does not obey he will go to jail.

The next relationship she says the corollary sentence encodes is that of frustrated modality. In this case "the link ta is used and has the meaning *but*". (Wells 1979:109). An example given is:

(46) B1 Li B2
nu wi-nu tuku ta, nu kiko-na
he call-int rel *that he shy*-3s.pa
He wanted to call out but he was shy.

Finally, Wells discusses the corollary sentence as it encodes frustated succession (1979:110-111). In this encoding she says that with frustrated succession in which the blocking circumstance is stated, ta means *but*, as in (47):

(47) B1
mafe-na le nane li-k-am tuka sa-k-inaig
dawn-3s.pa *and they walk*-cm-int rel *ask*-1s.pa
Li B2
ta nale mbul-nail
that they refuse-3d.pa
In the morning they spoke of going but the two refused (to go with them).

In frustrated succession stating the opposite circumstances, she says that ta/tanu means *although*, as in (48):

(48) B1 Li Bi
dokta kanger-naig tanu nane wakei-yam kumung kuga
doctor see-3p.pa *that they treat*-int *enough not*
Although the doctors examined him they could not treat him.

3.2.5 Ta as a conjunction in conditional sentences

Wells herself does not claim that the deictic article ta occurs as a conjunction in conditional sentences. However, we have already seen that in Erima the deictic article does occur with conditional sentences (2.6.7.) and it will be seen later that both Waskia and Suena use the deictic article in conditional sentences. For this reason it is quite possible that ndeta, which Wells (1979:127) says means *if*, is really composed of nde plus ta. An additional piece of evidence pointing to this is that she says ndeta can also take the clitic -nu, resulting in ndetanu, still meaning *if*. Recall that tanu occurs as a variant of ta in Siroi corollary sentences. ndetanu, then is quite likely nde plus tanu. An example of the conditional sentence is:

(49) B1 Li B2
nu puro-wa ndeta nu kanger-am-ngat
he arrive-3s.po *if him see*-int-3s.fu
If he should come he will see him.

In summary, we have seen that the deictic articles in Siroi, and in particular the deictic article ta have been analysed as being demonstratives, locatives, and conjunctions. As conjunctions, Wells has said that they relate embedded independent clauses to the rest of a clause, and encode semantic relationships including circumstance, condition with universal quantifier, hypotheticality, frustrated modality, frustrated succession, and condition. As such, she claims that ta can mean, according to context and function, *that, there, if, when, but, although.*

3.3 Waskia

Data for this section are from Ross and Paol (1978). The authors of the Waskia grammar sketch have called the deictic articles 'determiners' (p.59). They have posited three classes of determiners for the language. The first class is composed of mu, which corresponds to the English *the* and means *this one and no other.* It can also sometimes occur pronominally with the meaning of *it.* The second class of determiners distinguishes between two or more objects in terms of their location to the speaker:

pamu	*this*	(near speaker)
omu	*that*	(nearer to speaker than obumu)
obumu	*that*	(further from the speaker)

Although the authors themselves do not suggest this, notice that it would appear that pa-, o-, and obu- encode the semantic component of proximity and combine with -mu (which encodes definiteness) to form demonstratives. The third class posited are said to distinguish "between items of whether they are 'given' or 'new' in discourse" (p.59). They are as follows:

bo	*a certain another*	
manang	*this*	(referring to a more recently 'given' item, i.e. a secondary topic)
munta	*this*	(referring to a less recently 'given' item, also a secondary topic). (p.59).

Turning now to the Waskia mu, it will be seen that it functions much like the Erima wa, and the Siroi ta.

3.3.1 Mu and embedding

In their section on embedding (p.24-27), Ross and Paol identify mu as an embedding device which follows a clause filling the head noun slot of a noun phrase. These clauses derive from independent clauses. As an example they give (50):

(50) ane kadi anega buruk usag-am mu arig-em
I man my pig kill-ps.3s *the see*-ps.1s
I saw the man who killed my pig.

As in Erima and Waskia, the embedded clause is a final form clause whose constituent order is not disturbed and whose predicate suffixes retain their final (independent) form.

3.3.2 Mu as a constituent of the adversative conjunction

As with Erima and Siroi, the deictic article occurs with propositions in a relationship encoding contrast (p.16). When the two clauses being conjoined involve different referents, mu is used by itself with the meaning of *but* or in conjunction with mela *no, none* still meaning *but* as in (51):

(51) nunga nuam-net inongi tair-un mu
their 3.*mother-father* *village* *come*-ps.3p *but*.cd

kulak itelala munta me bager-un
boy *two* *that*.g *not* *stay*-ps.3p
Their parents came to the village, but those two boys weren't there.

When same referents are involved between two clauses, the conjunction tamu *but* is used. Again, considering that both Erima and Siroi use the deictic article in this very same function, and in light of mu being used in adversative sentences with a change of referents, e.g. (50) above, tamu looks suspiciously like ta plus mu, but this cannot be proved.

3.3.3 Mu as a constituent in cause-result relations

Ross and Paol state that cause-result relationships between clauses are signalled by muse (p.22). They call muse an adverb, and say it has the meaning of *so* or *for this reason*. In a later section, however, they themselves identify muse as being composed of mu *the* plus se *at, in, to, from* (p.26). An example of muse encoding cause is (53):

(53) kadi mu ani-so-le mu-se me tair-uki
man *the* *sleep*-pres.3s-cs *the-at* (so) *not* *come*-fut.3s
The man is sleeping, so he will not come.

Here we see a correspondence between Erima and Waskia, with the Erima wa and the Waskia mu corresponding to each other, and the Erima bo- corresponding to the Waskia se as in the Erima sentence (54):

(54) fai wa agore inyi-Ø-na wa bo-na ada m-o-na
man *that* *sleep* *be*-pr-3sS *that* *for*-3s *not* *come*-f-3sS
That man is sleeping so he will not come.

3.3.4 Mu as a constituent in purpose sentences

Purpose sentences in Waskia also use muse (p.22). Again this corresponds to Erima as a comparison of the Waskia example of a purpose sentence (55) and its Erima translation (56) reveal:

(55) nu manga t-ako-se mu-se urat bite-so
he *money* *get*-des-c *the-at* *work* *do*-pres.3s
He is working in order to earn money.
(lit. *He wants to get money, so he is doing work.*)

(56) no megemu t-einomo wa bo-na haruwe-Ø-na
he *money* *get*-nom *that* *for*-3s *work*-pr-3sS
He works in order to get money.

The last four examples (i.e. (53) through (56)) establish the fact that the Waskia se *at* and the Erima bo- *for* correspond in their functions in relation to the Waskia and Erima deictic articles.

3.3.5 Mu as a condition marker

Ross and Paol in analysing Waskia conditional sentences have noted that the condition clause is marked by mu. However, they do not identify it as the determiner mu and state: "it is not clear whether there is any connection between the determiner mu and the conditional marker -mu." (p.24). (It will be seen in sections 4 and 5 below that there is indeed a connection.) Turning now to some examples of -mu used as a condition marker, examine (57) and (58):

(57) nina den ik-ako-mu pala tair-anko
you.p *word hear*-des-cond *here come*-imp.2p
If you want to hear a story, come here.

(58) ito ane ikelako inela na-em-ale-mu kuer-em-ale
If I yesterday too.much eat-ps.1s-c-cond *die*-ps.1s-c
If I had eaten too much yesterday, I would have died.

Note that (57) is a normal conditional, and (58) a hypothetical conditional sentence, and mu occurs in both.

In summary, we have seen that the Waskia determiner mu *the* corresponds to the Erima deictic article wa in its occurrence as a relator for embedded clauses, as an adversative conjunction meaning either *but* or *although*, as a conditional marker, and as a constituent of conjunctions encoding cause-result and purpose. Also, it was shown (section 3.3) that other Waskia determiners function as secondary topic markers.

3.4 Suena

Data for this section are from Darryl Wilson of the Summer Institute of Linguistics, Papua New Guinea branch. He has been involved in linguistic analysis of Suena for over fifteen years. Wilson (1974:26) has analysed Suena as having three proximity markers:

e- *very near the speaker*
a- *near the hearer*
o- *distant from both the speaker and hearer*

These three proximity markers combine with case markers to form demonstrative pronouns:

-mi Subject, Instrument
-wa Location *at* of *from*
-go Location *at* or *toward*; Object *this*

(Suena data from this point on are from personal communication with Wilson.) In Suena, the proximity marker a- *there/that* (near the hearer) is the most frequently used deictic article in discourse because the other two (e- and o-) require that the objects referred to be in sight of the speaker and hearer, which is frequently not the case. All examples which follow use a-.

3.4.1 A- as an embedding device

Suena, as in the other languages examined above, embeds independent or final form clauses by use of the deictic as in (59)

(59) ema suna naso doisa a-mi tupia
man dog my hit.he that-Subj *come-he*
The man who hit my dog is coming.

The use of different case markers, of course, results in different roles for the embedded clause:

(60) ema suna naso doisa a-wa...
man dog my hit-he that-obj
The man who hit my dog
(functioning as a clause level object)

(61) ema suna naso doisa a-mi-ra
man dog my hit-he that-agent-of
The X of that man who hit my dog.
(functioning as a clause level agent)

(62) ema suna naso doisa a-mi emo
man dog my hit-he that-agent for
for the man who hit my dog.
(functioning as a clause level benefactive tagmeme)

3.4.2 A- and conditionals

The deictic a- occurs with both future conditionals and hypothetical contrary-to-fact relationships between independent clauses as in (63) and (64):

(63) so wa wamunoya, a-wa na bayamunona
place rain will.do that-O *I will.go*
If it rains, I will go.

(64) so wa wamia a-wa bayamena
place rain contra-fact.do that-O *contra-fact.go*
If it had rained, I would have gone.

Wilson has analysed a-wa in these examples as functioning as a topic marker.

3.4.3 A- and content reporting

An independent clause plus the deictic in conjunction with a perception verb encode content reporting:

(65) nu Lae bamisia a-wa na gosinona
he Lae went.he that-O *I know.I*
I know that he went to Lae.

3.4.4 A- and reason-result

Reason-result relationships use the deictic, whereas the reversal of the relationships (i.e., result-reason) optionally use the deictic:

(66) nu suna naso doisa a-mi emo na detena
he dog my hit.he that for I hit.I
He hit my dog, therefore I hit (him).

(67) na nu detena, (a-wa) ne-ra ko-ta nu suna naso doisa
I him hit-I that-O what-of not-but he dog my hit.he
I hit him because he hit my dog.

To summarise the Suena data, we have seen that the deictic article functions as a relativisation device, condition marker (or as Wilson has called it, a topic marker), a content marker, and a marker used to designate reason-result relationships.

3.5 Summary

The purpose of section 3 has been to establish that not only in Erima, but in some other languages of Papua New Guinea, the deictic articles appear to have a vast variety of functions and meanings. We have seen that in published grammars the deictic articles have been called conjunctions, demonstratives, adverbs, topic markers, given markers, conditional markers, embedding devices, etc., depending on the context in which they appear. In each case one deictic article in particular carries the load for all these functions. In the case of the languages with the close, mid, and far distinctions in the deictic articles (i.e., Erima and Suena), the mid deictic is the one with the greatest variety of functions and meanings. For the two languages with a two-way distinction in the deictic articles (i.e., Siroi and Waskia), the article meaning 'that' is the most productive in Siroi, and the determiner meaning 'the' is the most productive for Waskia. The deictic articles have been assigned the meanings of 'here, there, this, that, the, it, but, although, if' and occur as constituents of conjunctions meaning 'therefore, so, because'.

Analysing the Erima wa as a demonstrative pronoun, a locative, a definite article, a third person pronoun, a topic marker, a relativisation device, and as a conjunction signalling such logical relationships between clauses as cause-result, ground-conclusion, condition-consequence, etc. may be perfectly legitimate. But the wide range of contexts in which it occurs seems to demand that a wa_1, wa_2, wa_3, etc. be posited to cover the meanings it seems to have. The analyses of Siroi, Waskia, and Suena would also support such an analysis of Erima.

But, as will be seen in section 5, a much tidier explanation of the deictic articles is possible. It is proposed that the analysis of the deictic articles as presented in section 2 and for Siroi, Waskia, and Suena in Section 3, is in fact an etic view of the deictic articles. The key that opens the door to an emic or unified explanation of the deictic articles is to examine Erima from a topic-comment perspective. We now turn to the work of John Haiman on the Hua language of Papua New Guinea.

4. IS WA A TOPIC MARKER?

In recent years several articles have been published by John Haiman concerning the Hua language, which is located in the highlands of Papua New Guinea.

Haiman (1978a) presents data for Hua which are quite similar to those given for Erima and the other languages examined in section 3. The functions encoded by the deictic articles in Erima, Siroi, Waskia, and Suena, however, are not encoded in Hua by deictic articles, but rather by the interrogative marker ve. The meanings and parts of speech that he has observed encoded by ve are:

(68)

Meanings		Part of speech
Interrogative marker	as a	verbal desinence
conditional marker		verbal desinence
disjunction		postnominal clitic
topicalising particle		postnominal clitic
response to calls		complete utterance

(Haiman 1978a:2).

Scattered throughout three of Haiman's articles (1976, 1978a, and 1978b) are insights which are productive for the understanding of the Erima deictic articles.

The first important insight is that "similarity in the superficial form of grammatical categories usually reflects an underlying similarity of their meanings." (1978b:565). In his 1978a article he establishes that the grammatical constructions in which the Hua ve occur all have the same superficial form, suggestive of a similarity of meaning.

Second, he shows that conditional clauses are in fact topics. He states that "conditionals of all descriptions share with topics the attribute that they represent givens or (pre) suppositions in a sentence that are not subject to interrogation or denial." (1978a:27). Sentence topics are generally defined as the old or given information of a sentence. Conditions, however, do not have a widely accepted general definition. Haiman observes that there seem to be two aspects of conditions which linguists note: that they are hypotheticals, and that they have a causal relationship with the following clause (1978a:29). He shows, however, that there are counter-examples to the claim that conditionals are necessarily hypotheticals as in (69):

(69) (a) If I was a poor carpenter, I was a worse traitor.
(b) If I seemed unkind, it was because I was distracted.
(c) She's over fifty, if she's a day.

Haiman proposes that the first clauses in (69) are propositions which are granted, in other words, givens. He cites Ducrot (1972) as defining conditional clauses as follows: "A conditional clause is a given. A hypothetical clause is a hypothetical given." (Haiman 1978a:30). Haiman goes on to say that

> Ducrot suggests that the act of uttering a hypothetical conditional consists in asking the listener to accept for a time a proposition p which provisionally becomes the framework of reference for the discourse, in particular for the principle proposition q. (p.30).

In both his 1978a and 1978b articles, Haiman posits that Ducrot's definition for conditionals fits the definition for topics. Haiman (1978b:585) defines a topic as follows: "The topic represents an entity whose existence is agreed upon by the speaker and his audience. As such, it constitutes the framework which has been selected for the following discourse."

The third observation Haiman makes which is relevant to Erima is that in Hua, as in many other languages, "the formal mark of topic status ... is often an interrogative morpheme or construction." (1978b:571). An example given by Haiman is:

(70) e -si -ve baigu -e
come 3sg.fut interog *will.stay* 1sg.
Will he come? I will stay or *If he will come, I will stay.*

This, he says, parallels the use of rhetorical questions as topics as in:

(71) Is any among you in trouble? He should pray.

He cites Li and Thompson (1976:484) and Friedman (1976:142) as positing that one means of marking a NP as topic in English is by the formula 'You know NP?'. (Haiman 1978b:571). He concludes that

> ... the explanation for the similarity of conditionals and questions, it seems to me, is that conditionals (like other topics) are established in a discourse as given facts or entities with a formal device whereby the speaker seeks the agreement of his interlocutor as to their validity. This common formal device is the question, 'You know __?' Hence the common interrogative morphology of conditionals and topics. (1978b:572).

How are these observations of Haiman's relevant to Erima? First of all, Haiman's statement that surface structure similarity of constructions suggests similarity of meaning alerts us to the possibility that there may not be as many meanings and functions for the Erima deictic articles as appeared in section 2. In Erima, relative clauses, topics, reason clauses, grounds clauses, etc. all have the surface construction of final (or independent) clause plus deictic article (i.e., wa *that*).[7] Also, except for relative clauses, each one (condition clause, topic, reason clause, etc.) occurs as the left-most constituent of a sentence. Skipping for a moment Haiman's assertion that conditionals are topics, his third observation, namely that there appears to be a correlation in many languages between interrogative and topic constructions, also helps in understanding Erima. Although Erima does not morphologically mark interrogatives and topics in the same way, as opposed to Hua, anyone spending some time with speakers of Erima will quickly discover that they often put a question intonation onto the topic, condition, reason, grounds, etc. part of a sentence and many times actually pause, waiting for some sort of assent from the listener that he can identify the referent of the topic, or that he is willing to accept the particular proposition for the basis of the assertion the speaker is about to make. (See also Keenan and Schieffelin 1976:338). Recall Haiman's belief that conditionals "are established in a discourse as given facts or entities with a formal device whereby the speaker seeks the agreement of his interlocutor as to their validity". This leads naturally to the second observation Haiman made which we skipped, namely that conditionals are givens, or topics.

In analysing Hua, Haiman was led to connect conditions and topics on the grounds of both syntactic and semantic similarity. If it is true that syntactic similarity implies similarity of meaning, and if it is true that conditionals are indeed a type of topic, then it is possible that in Erima we should examine conditions and topics to see if they should be connected. Indeed, perhaps all constructions composed of a final clause occurring medially and followed by a deictic article have a common meaning. Haiman has said that both conditions and topics are entities whose existence speaker and hearer tentatively assume

for the basis or framework of the discourse to follow. This leads me to hypothesise that a final clause occurring medially and followed by a deictic article is in fact a topic. If so, it is also possible to conclude that the deictic article is a kind of topic marker in each case.

Remember that when data were given for Suena, it was stated that Wilson had analysed the deictic article in conditional clauses as being a topic marker (see 3.4.2.). Ger Reesink (MS in progress) has suggested that for Usan, another non-Austronesian language of the Madang Province, and indeed for all the languages with the same phenomenon as we have been examining, the deictic articles are markers of that which is 'given'. In relative clause constructions, then, the relative clause would represent a given, which is the claim made by Haiman (1976:267): "Relative clauses are generally the presuppositions in the sentence in which they occur".

At this point it would be helpful to define both *topics* and *givens*. Quite often in the linguistic literature, a sentence topic is defined as what a sentence is about. The *comment* is defined as what is communicated about the topic (see Beekman and Callow 1979:14, Lyons 1968:335). Apparently this definition was made popular by Hockett (1958:201). He states that in English and many languages of Europe the subject of a clause is the topic, and the predicate is the comment. Halliday and Hasan (1976:325-326) use the terms theme and rheme rather than topic-comment. There are those who state that in many linguistic works topic is being confused with subject. Chafe (1976:43,45) claims that subject is not merely a syntactic role, but is what the sentence is about. A true topic he defines as that which "sets a spatial, temporal, or individual framework within which the main predication holds." (1976:50). It is Chafe's definition of topic toward which Haiman leans.

Another way in which topic-comment is viewed is given (or old) versus new information. Halliday and Hasan (1976:326) state that all information units consist of two elements, a new element and a given element. A new element

> ... expresses what the speaker is presenting as information that is not recoverable to the hearer from other sources; and a GIVEN element, expressing what the speaker is presenting as information that is recoverable to the hearer from some source or other in the environment.

Given and new elements may occur in any position throughout a sentence. In fact, the sentence may not contain any givens at all, each part being new information. This seems to be a departure from the notion of topic-comment since literature generally states that all communication units have both a topic and a comment (as in Beekman and Callow 1979:33). Chafe (1976:3) defines givens in a very narrow way:

> Given (or old) information is that knowledge which the speaker assumes to be in the consciousness of the addressee at the time of the utterance. So-called new information is what the speaker assumes he is introducing into the addressee's consciousness by what he says.

By this definition, new information is not information which is unknown to or unrecoverable by the hearer, but merely information not in the hearer's consciousness at the time of utterance. It must be noted that both Haiman and Reesink use the term 'given' in a manner different from Chafe. For them, a given is that which the speaker presents as the framework for which an assertion is to be made. It is an entity which may either be factual or hypothetical.

As a hypothetical, it is a proposition which is agreed upon by the speaker and hearer to be tentatively accepted as the stage or point of departure for the act of communication. Thus, Haiman views both topics and givens in the same light, namely, as Chafe defined topics, they are "the framework within which the main predication holds".

In this section we have seen that the work of Haiman suggests that Erima be examined from a topic-comment perspective to see if this provides, as I believe it does, the key to understanding the function and meaning of the Erima deictic articles. This is the topic of the next section.

5. RELATIVISATION, TOPICALISATION, AND DEFINITE NPs

In this section an attempt is made to show that there is a rather simple way of viewing the data presented in sections 2 and 3 which ties together the various constructions using the deictic articles. It will be seen that the deictic articles do not have as many meanings and functions as a first glance would indicate.

5.1 Relativisation

In analysing the constructions containing deictic articles it is important to begin with clauses which are embedded in an *unmarked* object slot of a clause. By unmarked it is meant that the object occurs in its normal position in the clause, that is, after the subject and before the predicate. The reason that it is important to begin with such clauses is that they are clearly embedded and functioning as nominals. More will be said about this below.

Reesink (1979), citing Keenan and Comrie (1977) states that one factor in identifying the relativisation strategy for a particular language is the position of the relative clause in relation to the head noun it is modifying. There are three strategies suggested: postnominal (head noun plus relative clause), prenominal (relative clause plus head noun), and internal. As examples, Keenan and Comrie (1977:64) give (72) for postnominal, (73) for prenominal, and (74) and (75) for internal:

Postnominal:

		HN	RC				
(72)	der	(Mann,)	(der	in	seinem	Buro	arbeitet)
	the	*man*	*who*	*in*	*his*	*study*	*works*
	the man who is working in his study (German)						

Prenominal:

		RC				HN
(73)	der	(in	seinem	Buro	arbeitende)	(Mann)
	the	*in*	*his*	*study*	*working*	*man*
	the man who is working in his study (German)					

Internal:

(74) itye ye (ne ye (so) min ye) san
man past I past horse which see buy
The man bought the horse that I saw. (Bambara)

(75) (tənay (ʔəwa:) + Ø ʔəwu:w) + pu + Lˋ ʔciyawx
yesterday house DO *I-saw* Def *in I-will-sing*
I will sing in the house that I saw yesterday. (Digueno)

(In the above examples I have added the bracketing and labels.) Postnominal RC's are of the form HN + RC and prenominal RC's have the form RC + HN. Internal RC's have the HN within the RC. That is, part of the RC precedes the HN and part follows the HN.

Downing (1978:383) states that there are "languages in which it is difficult to establish the position of the deleted head as preceding or following the clause. I therefore label headless RC's *replacive relative clauses* when the clause stands in place of the nominal it is used to modify". One of his examples of replacive relative clauses comes from Bambara:

(76) tyɛ̀ bè n ye so mìn ye dy'
man the-C *I*-C *house* REL *see erect*
(C = nominal classifier)
The man is building the house that I saw.

(Bracketing is Downing's, labeling is mine.) A comparison of (74) and (76), which are both from Bambara, shows that both have the same structure. I conclude that Keenan and Comrie's internal RC's are equivalent to Downing's replacive RC's. Keenan and Comrie's analysis is that the head noun occurs within the RC, whereas Downing's position is that the head noun is deleted, and the RC stands in its place, functioning as the head noun as well as modifier of that deleted head noun. He represents such RC's as having the form

[NP[S ... REL NP ... V]]

Now I turn to Erima relative clauses. There are two relativisation strategies found in the language. The prenominal RC strategy occurs as a secondary strategy as in:

(77) (haruwe te-g-ou) (fai) mai-Ø-na
work get-hab-nom *man come*-pr-3sS
The workman is coming.

I call prenominal RC's in Erima a secondary strategy because they are statistically rare. Typically such RC's have a deleted subject NP and the verb is in an infinite form with tense suffixes and subject person-number suffixes deleted. In their place the nominalising suffix -ou occurs.

Much more frequently occurring, however, are relative clauses such as (78) - (80) below, which I have bracketed to show that they are parallel to Keenan and Comrie's internal RC's.

(78) Laanga mini-du-Ø
beach *go.down*-TS-SR

RC
HN
(feeyo (kuluma ima) laanga mata la tafa-ne-fa)
yesterday *bottle* *fishhook* *beach* *house* *at* *put*-1sS-CA

wa-fa te-ne-fa
that *get*-1sS-CA
I went down to the beach and got that fishing bottle that I put in the beach house yesterday.

RC
HN
(79) (Saul (kongkong da) hino-ta) wa-fa,
Saul *kongkong* *taro* *bake*.3sS.ip *that*-emp

yame nganononga tafa-hai-ta
my *two* *put-for.me*-3sS.ip
Those kongkong taros Saul baked, she set aside my two for me.

RC
HN
(80) ji (feeyo (fai ei) yame gauna war-a-ne)
I *yesterday* *man* *three* *my* *dog* *hit*-rp-3pS

wa-fa nerige-Ø-ne
that-emp *see.them*-pr-1sS
I see those three men who hit my dog yesterday.

In each of the three examples above from Erima, the head noun occurs internal to the RC (Keenan and Comrie's viewpoint). Downing's perspective of the same phenomena is that the head noun (which either precedes or follows the RC — it is impossible to tell) is deleted and the RC is a clause with the NP relativised upon retained in full form. Under such an analysis, the NP in (80) can be viewed as having the structure of either (a) or (b) of (81):

(81) a) HN RC

(Ø) (feeyo fai ei yame gauna war-a-ne) wa-fa
yesterday man three my dog hit-p-3pS *that*-emp

RC HN

b) (feeyo fai ei yame gauna war-a-ne) (Ø) (wa-fa)
yesterday man three my dog hit-p-3pS *that*-emp
Those three men who hit my dog yesterday.

As quoted above, Downing says that a replacive RC, of which the Erima (78) - (80) are examples, "stands in place of the nominal it is used to modify". I take the words 'stands in place of' to mean that the RC functions not just as a modifier, but actually functions as the head noun of that NP. In (80), therefore, the RC functions as the head noun of the NP filling the object slot. That is, the filler of the head noun slot of the NP is the RC.

Notice from a comparison of (80) and the independent active sentence (82) that the RC in (80) is an independent (i.e., final form) clause:

(82) feeyo fai ei yame gauna war-a-ne
yesterday man three my dog hit-p-3pS
Yesterday three men hit my dog.

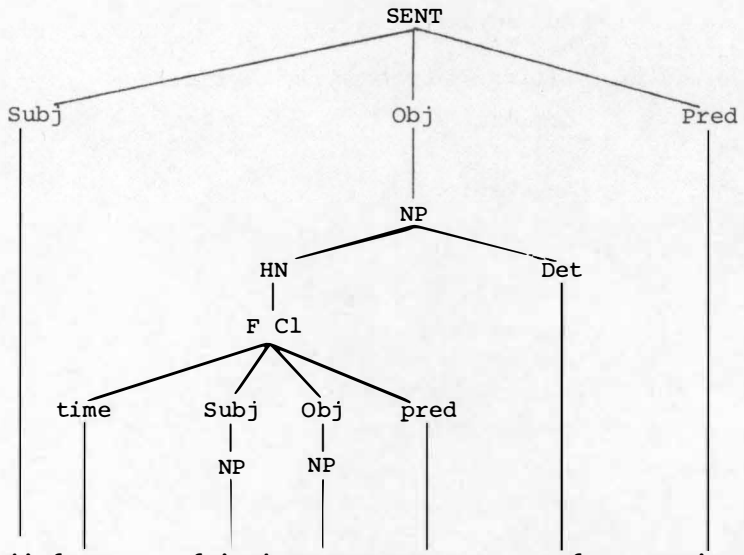
The final form clause (82) is embedded in the head noun slot of the NP filling the object slot in (80). It is important to note that the final form clause is not changed in any way when it is embedded.

At the beginning of this section (5.1), I stated that in analysing the constructions composed of a final form clause plus deictic article it is important to begin with final form clauses embedded in an unmarked object slot of a clause. I said this because when a final form clause embeds into an unmarked object slot there is no controversy over the status of the final form clause. In such a position, since it occurs between the subject and predicate of the matrix clause, it can only be analysed as being embedded and functioning as a nominal. On the other hand, once that same embedded clause, which is the object of the matrix clause, is shifted to a marked (i.e., sentence initial) position, it is easy to lose sight of the fact that it is embedded and that it is the filler of the head slot of a NP marked as being definite by a deictic article. Instead it is incorrectly viewed as not embedded and as being the filler of the first base slot of a sentence. Indeed, this fact becomes obscured in past analyses (e.g. Well's analysis of Siroi). Losing sight of this fact is part of the reason that the deictic articles appear to have so many functions.

(80) above is an example of a final clause plus deictic article as filler of an unmarked object slot. I want to stress that the embedded final form clause functions as a nominal and is the filler of the head noun slot of an NP. The deictic article is filler of the determiner slot of that same NP, marking it as definite. The point I want to make is that it is a *definite NP* which fills the object slot of the matrix clause in (80).

On the basis of my above analysis, (80) may be represented as follows:[8]

(83)



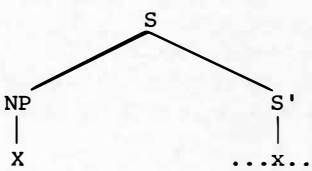
5.2 Topicalisation

Analysing Erima from a topic-comment perspective is very productive in that it explains a large amount of data. Gundel (1975:27) quotes Chomsky (1965:221) as suggesting that

> Topic-Comment is the basic grammatical relation of surface structure corresponding roughly to the fundamental Subject-Predicate relation of deep structure where Topic is defined as "the left-most NP immediately dominated by S in the surface structure" and the comment is "the rest of the string". (cf. Hockett 1958:201).

Notice that it is the NP which is focused upon as topic. Gundel goes on to posit that the underlying structure of all sentences is:

(84)



where the NP is topic and S' is the comment. Note the following Erima sentences analysed from a topic-comment (NP-comment) perspective:

(85) Topic Comment

NP
yame babo no anyukaro
my brother he big
My brother is big. (Lit. *My brother, he is big.*)

(86) Topic Comment

NP
yame babo anyukaro
my brother big
My brother is big.

(87) Topic Comment

ji age-fe dig-a-i
I eye-my climb.up-rp-3sS
I forgot. (Lit. *I, my eye climbed up.*)

(88) Topic Comment

ji ogo-fe dig-a-i
I stomach-my climb.up-rp-3sS
I was full. (Lit. *I, my stomach climbed up.*)

(89) Topic Comment

NP
yame babo um-a-i
my brother die-
My brother died.

(90) Topic Comment
NP
yame babo no um-a-i
my brother he die-rp-3sS
My brother died. (Lit. *My brother, he died.*)

There are several things to note about the above examples of topic-comment. First, note that the difference between (85) and (86), as well as the difference between (89) and (90), is that in (86) and (89) the subject NP is functioning as both grammatical subject and topic. In (85) and (90), the NP *my brother* functions as topic, while the anaphoric pronoun is the subject of the clause functioning as the comment. Secondly, note that in both (87) and (88) there is a clear difference between the referent of the topic part and the referent of the comment part of the sentence. The topic has as referent ji *I*, whereas the comment involves the eye or the stomach, (with the possessive suffix in agreement with the topic) and the predicate is third person singular in agreement with the subject of the clause filling the comment slot, rather than the topic. (87) could be paraphrased 'As for myself, my eye climbed up'. (An idiom meaning 'I forgot.') Erima has many body part idioms which cannot be understood except from a topic-comment viewpoint.[9]

As exemplified by the above examples, a topic is defined as the left-most NP or, as will be seen later, as the left-most *axis-relator* phrase. In some cases the left-most NP may also be the grammatical subject. Topic is defined as the proposition or propositions that are syntactically encoded as the left-most NP or ARP of a sentence and (following Haiman and Chafe (section 4.0)) function to set the stage or framework within which the assertion to follow holds.

As mentioned previously, an object NP following the subject clause is in an unmarked position. The object NP may be *topicalised* by fronting or left-dislocation. The normal SOV pattern changes to OSV, marking the object as topic. Compare (80) with (91):

(91) Topic

feeyo	fai	ei	yame	gauna	war-a-ne	wa-fa
yesterday	*man*	*three*	*my*	*dog*	*hit*-pr-3pS	*that*-emp

Comment

ji nerige-Ø-ne
I see.them-pr-1sS
Those three men who hit my dog yesterday (topic), *I see them.*

Note that (91) could just as easily have been stated as:

(92) Topic

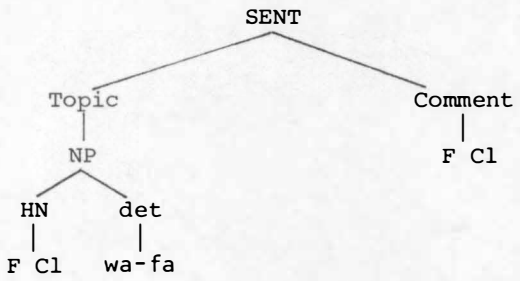
feeyo	fai	ei	yame	gauna	war-a-ne	wa-fa
yesterday	*man*	*three*	*my*	*dog*	*hit*-rp-3pS	*that*-emp

Comment

ji nere nerige-Ø-ne
I them see.them-pr-1sS
Those three men who hit my dog yesterday (topic), *I see them.*

In (91) the object moves to a marked (i.e. topicalised) position. In (92) the object tagmeme has the anaphoric pronoun nere *them* as filler, showing that the topic NP no longer functions as object, but purely as topic. Again, it is important to realise that the filler of the topic slot of the sentence is a NP, not an independent (final) clause. That is, the clause is functioning as a nominal and filling the head noun slot of a NP. (92) is represented as:

(93)



It is at this point that we turn to the data which were causing problems. Perhaps because of an English language bias, and also because of the final or independent form of both clauses, the most natural reaction to a conditional sentence such as the Erima example (94) is to think that two independent clauses are being conjoined by wa, which should now be glossed *if*:

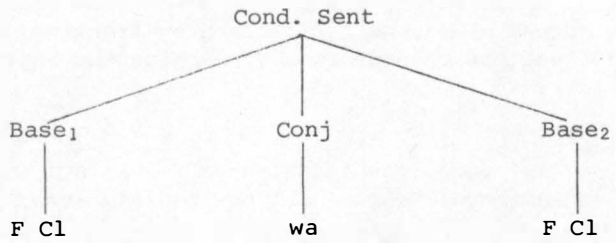
(94)

yaage	mo-o-na	wa	ji	yaf-o-ne	bo-ne
rain	*come.down*-f-3sS	*that*	*I*	*sit*-f-1sS	*intent*-1sS

If rain comes, I will stay.

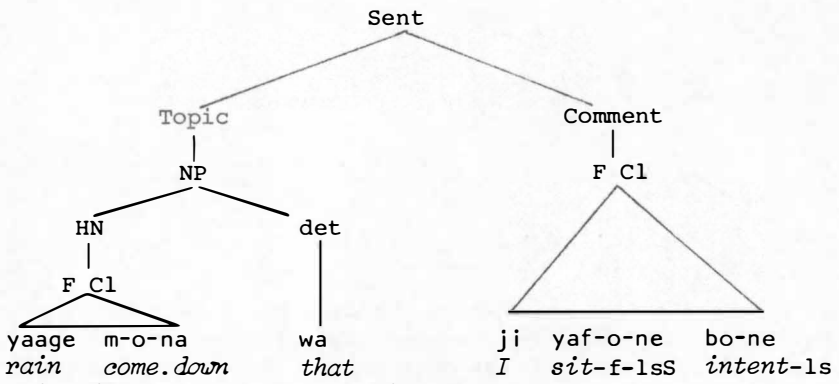
That is, (94) is interpreted as containing two independent clauses both on the same level of the grammatical hierarchy (i.e., both fill sentence level slots) and conjoined by the sentence level conjunction wa, as represented below:

(95)



This is precisely how Wells (1979:108) has analysed Siroi equivalents of (94). She states that "when a Corollary Sentence encodes hypotheticality, potential tense is used in the Predicate of Base 1, and future tense in Base 2. In this encoding the link ta/tanu has the meaning *if*". She previously states that "the link between the Bases of the Corollary Sentence is the demonstrative ta *that* or the demonstrative ta plus the nominaliser -nu." (p.104). Note from this quote that Wells views the deictic article as a conjunction (in her terms a link) and the two predicates as fillers of the base slots of the sentence. In other words, she views the deictic article and the predicates as being on the same level in the grammatical hierarchy and the predicates as being in a paratactic relationship. It is at this point, I believe, that the data are viewed improperly. We have already seen that the Erima example (91) is a case of a topicalised object NP, with the head noun slot filled by an embedded independent clause. That seems self-evident. But a comparison of (91) and (92) shows no grammatical difference between the two as far as clause structure and sentence structure are concerned. In an etic view both cases show a final clause plus a deictic article plus a final clause. What I am asserting here is that there is no real difference between (91) and (94) apart from lexical differences.[10] The grammatical structure on the sentence level is identical. That is, (94) should be viewed as:

(96)



We have already seen that Haiman claims that conditionals are topics (section 4.0.). There are not only semantic grounds for this, but in Papua New Guinean languages such as Erima there are syntactic grounds. What I am claiming here is that a final clause plus a deictic article is nothing other than a topicalised NP. Nominalisation is achieved merely by position, i.e., by filling the head noun slot of a NP. That NP in turn becomes topicalised by virtue of its position in the sentence (i.e. left-most NP).

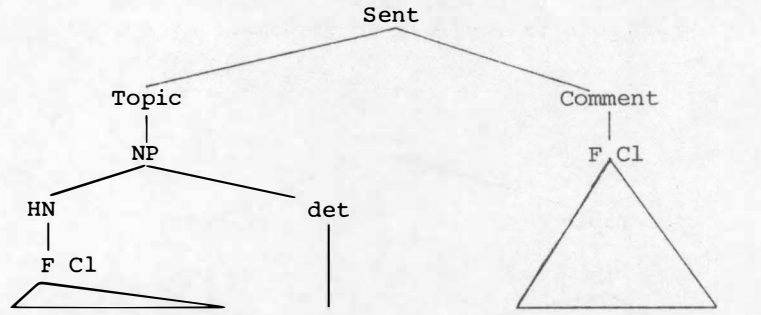
As evidence that conditions are topics in Erima, I offer the following observations. First, conditional clauses in Erima have structure identical to any Erima topic containing a verb (which is usually the case). That is, a final form verb plus deictic article is common to both. Second, conditional clauses have the same sentence position as topics (i.e., they are both the left-most constituent). Third, conditions are marked as definite by the deictic article, as are topics. Definiteness, as we will see in a later section, is the characteristic of topics. And last of all, I believe that Erima adds further weight to Haiman's belief that the fact that so many languages throughout the world have identical encoding for conditions and topics suggests that the two notions are related. This identical encoding of conditions and topics is found in many often unrelated languages of Papua New Guinea. For these reasons, I believe conditions are topics in Erima.

In section 2. I stated that the deictic article was not only a locative or a demonstrative pronoun in function, but also a conjunction encoding various inter-clausal relationships. I have argued, however, that what at first appeared to be conditional sentence is in fact a topic-comment construction. The conditional notion is conveyed by the tense of the predicates of the two clauses (i.e. both are future tense). We now turn to each of the other logical relations mentioned in section 2. to examine them from a topic-comment viewpoint.

In section 2., the following relationships were said to be encoded by the deictic article in its function as a link between the bases of sentences: content-reporting, reason-result, result-reason, means-purpose, ground-conclusion, adversative, and condition-consequence (with its three subtypes of future-oriented, non-future oriented, and argumentative condition). It will be seen in the following examples that in each case the syntactic structure is the same, namely, a F Cl plus the deictic article, plus a F Cl. In each case the first clause is actually a nominal; it is filler of the head noun slot of a NP. The deictic article is filler of the determiner slot of that same NP. That NP is the filler of the topic slot of the sentence, and the second final clause is filler of the comment slot. (Cases involving bo- *for* are discussed below.) Based on this analysis we may propose tree structures as follows:

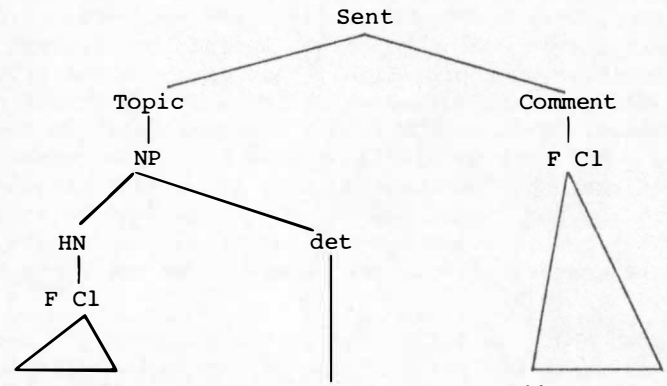
Content-Reporting:

(97)



Non future oriented-condition:

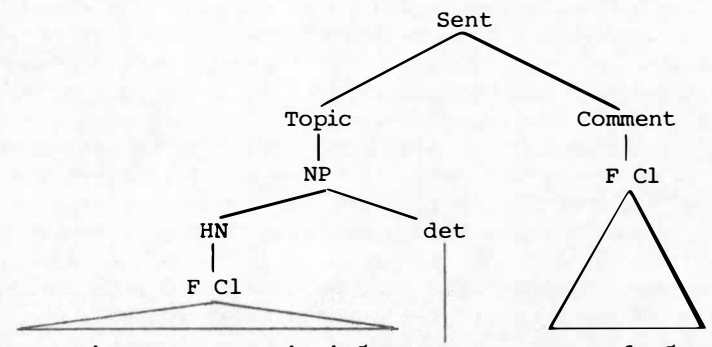
(98)



no m-age wa ji man-ege
he come-contrafact *that* *I go.up*-contrafact.1sS
(Given that) he would have come, I would have gone up.

Argumentative conditional:

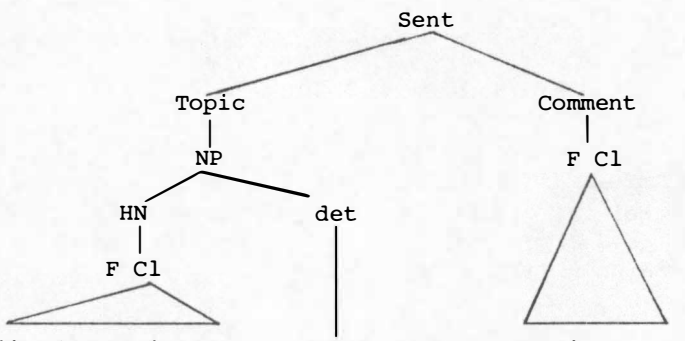
(99)



nomo ima inyi-Ø-na wa no yafa-Ø-na
his fishing.pole be-pr-esS *that* *he sit*-pr-3sS
If his fishing pole is (there), he is home.

Adversative:

(100)



ji da aj-e-ne wa ny-ei uwa
I food cook-rp-1sS *that* *eat*-nom *not*
(As for my) having cooked food, I didn't eat.
or *I cooked food, but I didn't eat.*

It is difficult to give a translation of (98) and (99) into English which retains the topic-comment flavour found in the Erima. If it is kept in mind, however, that the topic proposition states the framework within which the following proposition holds, it can be seen that it truly is a matter of topic comment. The assertion in (98) that 'I would have gone up' holds within the domain of 'his having come'. The assertion 'he is home' in (99) holds within the framework of 'his fishing pole is (there)'. The force of (100) could perhaps best be expressed by the paraphrase 'You know how I cooked food? Well I didn't eat (it)!' which has two constituent parts: a question demanding assent, which encodes topic, and a second sentence which encodes an adversative relationship, without an overt marker such as the English 'but'.

I turn now to relationships involving bo- *for*, as in:

(101) no taura t-a-i wa bo-na um-a-i
he sickness get-rp-3sS *that for*-3s *die*-rp-3sS
He got sick, therefore he died.

It would seem that here is a true case of the deictic article functioning as a sentence conjunction together with bo-. But such is in fact not the case. Again the final clause plus wa is functioning as a NP. This can be seen from the series of examples below (i.e., 102-105). bo- is actually a reason or purpose marker on a clause level as in:

(102) no gei idada-weinomo bo-na mani-ta
he betel.nut buy-nom *for*-3s *go.up*-3sS.rp
He went in order to buy betel nut.

(103) no gei idada-wo-na bo-na mani-ta
he betel.nut buy-f-3sS *for*-3s *go.up*-3sS.rp
He went in order to buy betel nut.

(104) no gei bo-na mani-ta
he betel.nut for-3sS *go.up*-3sS.rp
He went for betel nut.

(105) no bemu bo-na mani-ta
he brother for-3s *go.up*-3sS.rp
He went because of his brother.

Note that (102) and (103) involve reason or purpose tagmemes on the clause level, filled by axis-relator phrases, with a nominalised clause filling the axis slot in (102), an embedded final clause (future tense) filling the axis in (103), a noun in (104), and a possessive noun phrase in (105). To someone unfamiliar with Erima, (105) appears to be a case of benefaction, but this is not so. Erima has verbal suffixes to encode benefaction. So, if an Erima speaker wished to say 'I am going to buy betel nut for my brother', he would say,

(106) ji yame babo gei idada-fu-weinomo bo-ne
I my brother betel.nut buy-for.him-nom *for*-1s
mani-Ø-ne
go.up-pr-1sS
I am going to buy betel nut for my brother.

The above examples of purpose or reason tagmemes are represented by the following clause formula:

(107) Nuc:subj + Mar:purpose + Nuc:predicate

It is possible to topicalise the purpose margin of the clause by moving it to topic position via left-dislocation, as in exemplified by (108) and (109):

(108) ji babo bo-ne ada isi-Ø-ne
I brother for-1s *not hear*-pr-1sS
I don't think about my brother.

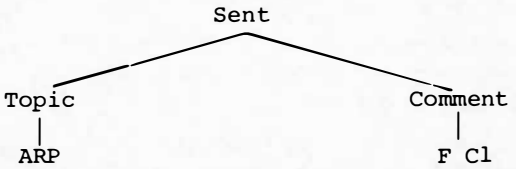
(109) babo bo-ne ji ada isi-Ø-ne
brother for-1s *I not hear*-pr-1sS
(As for) my brother, I don't think about (him).

Compare (109) and (110), in which is seen the same structure as (101):

(110) babo wa bo-ne ji ada isi-Ø-ne
brother that for-1s *I not hear*-pr-2sS
(As for) that brother, I don't think about (him).

In the case of (110), the purpose or reason tagmeme has been topicalised and is filled by an axis-relator phrase in which the definite NP 'that brother' fills the axis slot. In (101) the reason tagmeme is also topicalised, and is filled by an axis-relator phrase, but the filler of the axis slot is a definite NP which has embedded independent clause as filler of the head noun slot. Both (101) and (110) can be diagrammed as:

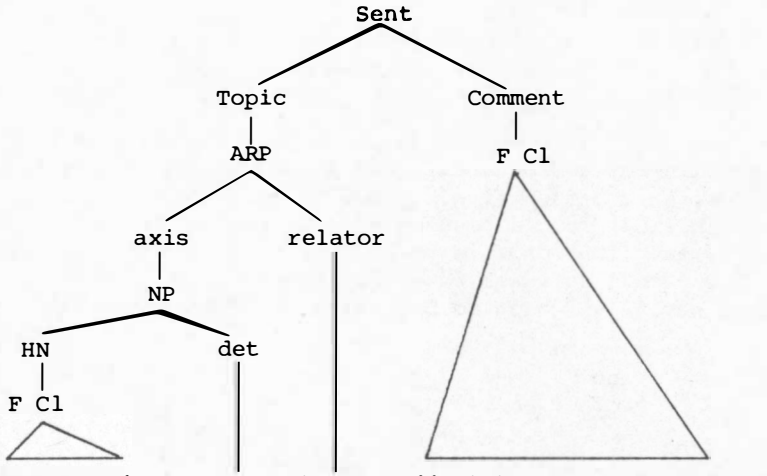
(111)



In light of this analysis we continue with examples of various inter-clausal relationships encoded by topic-comment. Note the following tree structures:

Reason-Result:

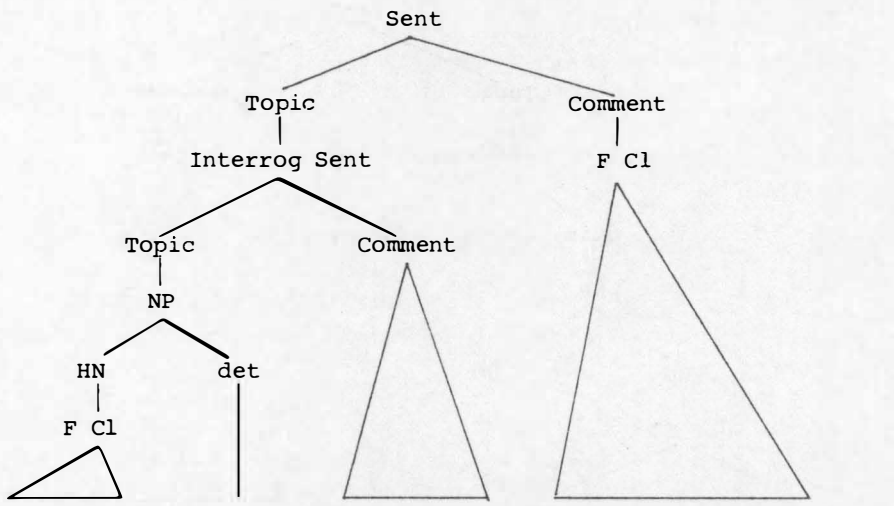
(112)



no um-a-i wa bo-na ji babo ete uwau
he die-rp-3sS *that for*-3s *I brother one without*
Because he died, I am without a brother.

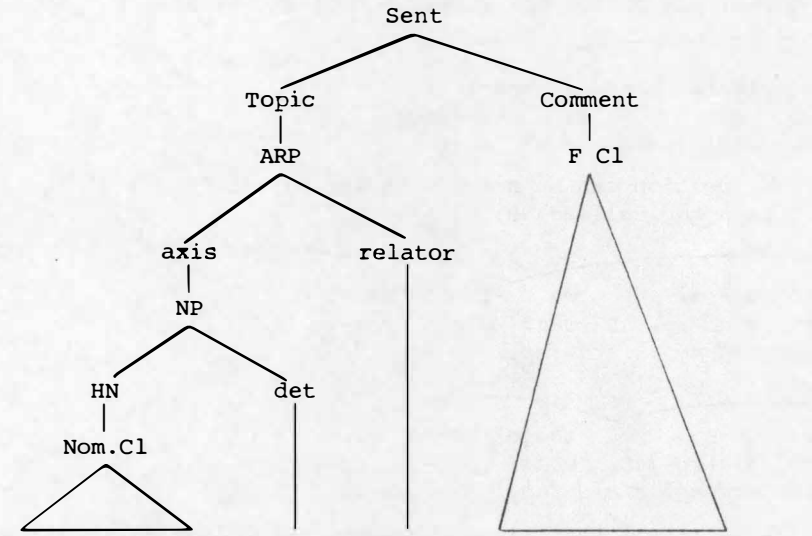
Result-reason:

(113)



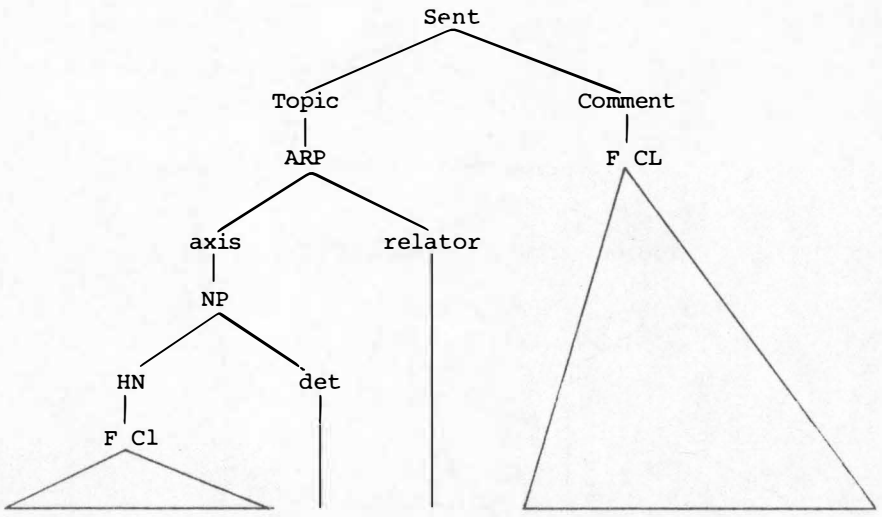
Means-purpose:

(114)



Argumentative:

(115)



In order to understand (113) properly several things must be known. First, (116) is the normal way to ask the question 'Why did he die?':

(116) no taate bo-na um-a-i //
he what for-3s *die*-rp-3sS
Why did he die?

Second, the same question can be asked with the clause 'He died' filling the head noun slot of a topicalised NP:

(117) no um-a-i wa taate bo-na
he died-rp-3sS *that what for*-3s
(Regarding) his dying, why (was it)?

(118) no um-a-i taate bo-na //
he die-rp-3sS *what for*-3s
(Regarding) his dying, why (was it)?

Returning to (113), recall that Li and Thompson (1976) (see.4.0) have suggested that 'You know NP?' is a topicalisation device in English. (113) is precisely the same sort of structure where the question (117) fills the topic slot of (113). That is, (113) could be represented in English as 'Why did he die? (rhetorical question as topic) He got sick'. The difference is that in Erima a final pause does not occur, and the intonation pattern rises at the end of the topic segment, that is, sentence medial intonation occurs:

(119) no um-a-i wa taate bona / no taura t-a-i //
he die-rp-3sS *that what for*-3s *he sickness get*-rp-3sS
He died because he got sick.

To summarise at this point, I have argued that constructions involving the deictic articles following final clauses are cases of topicalised NPs or ARPs. This has been argued on the basis of the observation that NPs function as fillers of the object slot of unmarked object tagmemes (i.e., in SOV sequences). In such cases the final clause is clearly embedded into the head slot of the noun phrase. An object NP may be topicalised by left-dislocation. Reason or purpose margins in clauses can also have final clauses as the filler of the head slot of the NP filling the axis of the ARP, and they too may become topicalised by left-dislocation. Thus the topic-comment construction is the basis for the various interclausal relationships we have seen, and it explains the wide variety of interclausal relationships encoded by constructions using the deictic article. A question which remains, however, is the meaning and function of the deictic article in such constructions. We have already said that the deictic article should not be glossed with such meanings as 'if' or 'but', etc. Should it then be considered a topic marker, or a marker of 'givens'? This too would be a misunderstanding. To see this it is necessary to investigate the nature of definite NPs in relation to topics.

5.3 Definite NPs

According to Li and Thompson (1976:461), "one of the primary characteristics of topics is that they must be definite". They go on to add that "according to this characterisation of definiteness, proper and generic NPs are also understood as definite".

However, not all linguists would claim that a topic must be definite. This is exemplified by Sgall, Hajičová, and Benešová (1973:197) who state that "it is well known that the NP's in the topic primarily are definite (or generic) but that this is not the only possibility". This tendency for topic NPs to be definite is the reason that in Erima the deictic articles occur so often in the constructions filling the topic slot of sentences. And, this helps show why the deictic articles are not to be considered topic markers or markers of givens. Topicalisation or givenness is encoded by virtue of the NP's position in the sentence (i.e. it is the left-most NP). If this is not the case, if the deictic article is to be understood as a topic marker, then how could (120) be explained?

(120) yame babo ji no bo-ne ada isi-Ø-ne
my brother I him for-1s *not hear*-pr-1sS
My brother (topic), *I don't think about him.*

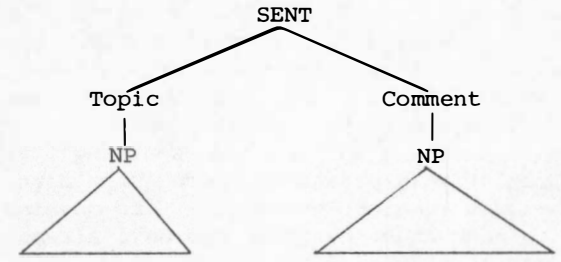
In (120), the possessive noun phrase yame babo *my brother* is clearly marked as topic. How? By a deictic article? No, by virtue of its sentence position. And, (121) can just as easily be uttered:

(121) yame babo wa-fa ji no bo-ne ada isi-Ø-ne
my brother that-emp *I him for*-1s *not hear*-pr-1sS
That brother of mine (topic), *I don't think about him.*

In each case, with or without the deictic article, topic is encoded by sentence position. For this reason, the deictic article is to be considered not as a topic marker or a marker of givens, but as the determiner of a NP which may happen to have a final clause embedded in the head noun slot.

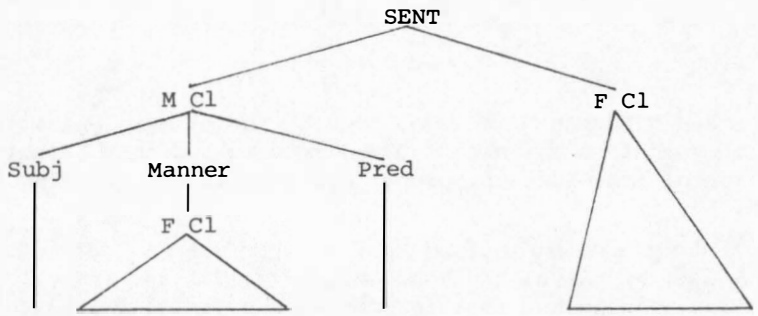
Further evidence that points away from calling the deictic article a topic or given marker is that many times in texts the embedding of final form clauses is recognised merely by their position within a clause, and they do not have a deictic article following:

(122)



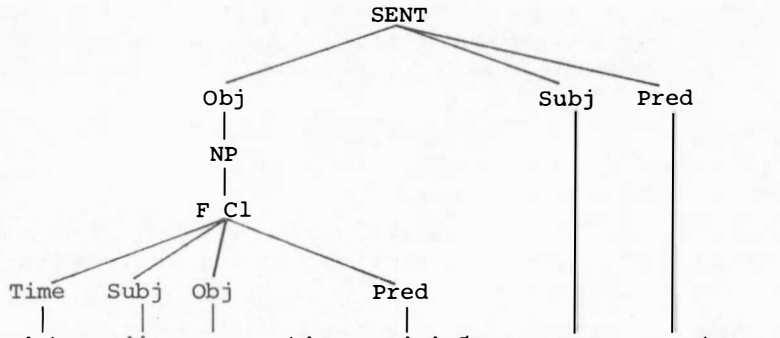
babo le-ta fai wa-nu rute
brother say-3sS-ip *man that*-loc *perhaps*
Perhaps that man there is the one my brother talked about.

(123)



no babo ono-wa-i ono-du-Ø oojo-wei uwa
he brother do-rp-3sS *do.thus*-TS-SR *follow*-nom *not*
He didn't do as his brother had done.

(124)



elebe ji tere abitemu-tigi-Ø-ne tere ure-Ø-ya
*now I you show.-you.*pl-pr-1sS *you see*-pr-2pS
(That) which I am now showing you, you see.

In each of these three examples, a final form clause occurs sentence medially without a deictic article following it. (122) and (124) are examples of final clauses functioning as topic NPs, and (123) is an example of a final clause embedding into the manner slot of a clause.

5.4 Summary

I have argued that the deictic articles in Erima have but two basic meanings and functions which correspond to the English demonstrative adverbs (*here* and *there*) and demonstrative pronouns (*this* and *that*). Constructions in Erima and other languages of Papua New Guinea which seem to have the deictic article functioning as sentence level conjunctions meaning 'if, 'but' 'although', etc., are in fact topicalised definite NPs or ARPs which contain a definite NP as filler of the head noun slot or axis slot (in the case of ARPs). The deictic article in such cases functions as the determiner of the NP (i.e., it marks it as definite). The majority of cases involving topicalised NPs have to do with definite NPs (and therefore deictic articles) because a definite NP is more likely to be a topic than an indefinite NP.

A question which may be raised at this point concerns ambiguity. Since so many semantic notions (e.g., adversative, condition-consequence, reason-result, etc.) are all encoded identically in Erima, how do hearers know which notion the speaker is encoding? Although I cannot fully answer this question, I would suggest that the following clues aid the hearer in decoding an utterance.

First, native speakers share a cultural world view and knowledge of their universe. This would aid a hearer in understanding the intent of the speaker. A case at point is the notion of adversative relationships. All languages have a certain *script* they follow. Specifically, the occurrence of one action will immediately result in an expected action sequence. Such *expectancy chains* may be universal or culture specific. (100) above involves a universal expectancy chain which is frustrated. It is expected probably in all societies that having cooked food, one would eat it. Therefore, in (100), although the surface encoding is identical to that of many other notions, the frustration of the expectancy chain (i.e., 'I cooked food ... I did not eat it.') signals the adversative relationship between the two propositions.

Secondly, the immediate context provides clues for the hearer to understand what notion is encoded. Finally, the very choice of lexical items also provides clues. As far as conditionals are concerned, tense suffixes encoding the future tense would be indicative of a future condition. Contrafactual conditions, on the other hand, are clearly marked morphologically as in (98) even though they still use a deictic article.

6. DISCOURSE FUNCTIONS OF THE DEICTIC ARTICLES

This section covers not only the role of the Erima deictic articles in discourse, but also touches on the discourse functions of grammatical constructions of which the deictic articles are a constituent (i.e., sequences of embedded final form clause plus deictic article).

6.1 Referential cohesion

There are various semantic features which go into making a text. Halliday and Hasan (1976) state that one of the most important of those semantic features is cohesion. Cohesion is what makes the constituents of a text or discourse hang together, creating a unified whole. They state that

> ... cohesion occurs where the INTERPRETATION of some element in discourse is dependent on that of another. The one PRESUPPOSES the other, in the sense that it cannot be effectively decoded except by recourse to it. When this happens, a relationship of cohesion is set up, and the two elements, the presupposing and the presupposed are thereby at least potentially integrated into a text. (Halliday and Hasan 1979:4).

They identify five types of cohesion: reference, substitution, ellipsis, conjunction, and lexical. Of these, the notion of reference has relevance to the Erima deictic articles.

In English, three are various ways in which referential cohesion is established. Among these is the use of the definite article, demonstrative pronouns, and the demonstrative adjectives. We have seen in previous sections (see 2.1 and 2.2) that Erima deictic articles have functions corresponding to these three English grammatical categories. According to Halliday and Hasan (1976:31), a lexical item in a language is referential when its interpretation cannot be determined from the item itself, but only by recourse to something else. Such is the case with the definite article and demonstratives in English, and the deictic articles in Erima. For example, if someone opens a book and in the middle of a paragraph reads, *The man wore a green hat*, he can certainly understand the sentence as a whole, but the interpretation of 'the man' depends on recourse to the previous context. As Halliday and Hasan were quoted as saying above, when the interpretation of an item is dependent upon recourse to some presupposed item, cohesion is established. In this case it is referential cohesion which is established.

Reference may be classified as to whether the lexical item has reference to something outside of a text or within a text. ('Text' is being used here to mean both oral and written discourse.) Reference to something outside of a text has been called by Fillmore (1975:40) *'gestural' reference*. By this he means that the lexical item "can be properly interpreted only by somebody who is monitoring some physical aspect of the communication situation". This is what Halliday and Hasan (1976:18) call *exophoric* reference. For example, if someone overhears someone else say *Look at that fire!*, the only way *that* may be accurately interpreted is by recourse to the physical environment. In the case of reported dialogue a different type of exophoric reference occurs. In a narrative text in which one participant uttered *Look at that fire!* to another participant, the interpretation of *that* (that is, the identification of its referent) cannot be made by the hearer of the reported dialogue by recourse to the physical environment. In such cases, say Halliday and Hasan (1976:18), the reader (if the text is written) or audience (if the text is oral) create in their minds a 'context of situation' in order to interpret the demonstrative. Neither type of exophoric reference is cohesive.

On the other hand, if the interpretation of an item may be made by reference to another item within the text as in (125), the type of reference is termed *endophoric* by Halliday and Hasan (1976:33):

(125) A man stood impatiently waiting for a train to London.
When the train arrived he shoved his way on board.

In (125), both 'the' in 'the train' and 'he' are cases of endophoric reference. Their interpretation is dependent upon recourse to the bit of text preceding their occurrence.

Endophoric reference may be broken down into two types: reference which refers backward and reference which refers forward in text. Although some writers (e.g. Fillmore 1975:40 and Lyons 1977:650) call both backward and forward reference *anaphora*, Halliday and Hasan (1976:14ff) call reference back to an item in text *anaphoric reference*, and reference forward to an item in text *cataphoric reference*. 'The' in 'the train' in (125) is an example of anaphoric reference. In (126) below, 'this' is a case of cataphoric reference its interpretation depends on the text following it:

(126) This is what he said, "Jones is fired for incompetence".

To summarise, reference is either endophoric (within text) or exophoric (outside of text). Endophoric reference may be further categorised as anaphoric (referring back in text) or cataphoric (referring forward in text). In English, according to Halliday and Hasan (1976:68-75), of the demonstratives and the definite article only *this, these,* and *here* provide cataphoric cohesion, although they may also function anaphorically. *The, that, those*, and *there* provide only anaphoric cohesion. (*The* may occur cataphorically only in a *non-cohesive* way.) For the purpose of typologies, and for the purpose of translating materials from one language to another, it is important in the analysis of a language to determine if the demonstratives, etc. in the source language match those of the target language in their usage endophorically and exophorically. While in English *this* may be used both anaphorically and cataphorically, it is possible that in another language the equivalent demonstrative may be used only cataphorically. Or, while the English *that* may only be used anaphorically in a cohesive way, it is possible that the equivalent demonstrative in another language may be used both anaphorically and cataphorically.

Erima, as has been discussed in earlier sections, has three deictic articles: wo *that, those, there (far distance)*, wa *that, those, there (mid-distance)*, and be *this, these, there (close by)*. Of the three, wo is not used endophorically.[11] Although be does occur endophorically, it is more often used exophorically. wa is used more often endophorically than exophorically.

First, examples of the Erima deictic articles used exophorically will be given:

(127) umamu isoki-tu-wa-i, "Jei, wo fai wei
father ask-3sO-rp-3sS *dad, there man who*

mai-Ø-na yo?"
come-pr-3sS *yes*
(He) asked (his) father, "Dad, who (is) (the) man coming there?"

(128) nomo oya isoki-wa-i, "Ei, ne haya wa
his wife ask-rp-3sS *hey, you plates those*

adadu elege-ne-fa"
how get.pl-2sS-CA
His wife asked, "Hey, how did you get those plates?"

(129) ere ira-gonga esuwa ebere kaafa be
we tomorrow-become afternoon our game this

aji-du-Ø nyei-nomo
cook-TS-SR *eat*-pl.inclusive.S
Tomorrow afternoon we (inclusive) *will cook and eat this game of ours.*

Of course, without the context it is impossible to know whether or not the deictic articles in the above examples were used exophorically. However, their context (not given here for the sake of brevity) clearly indicates exophoric usage.

As mentioned previously, there is a type of exophoric reference which does not refer to the physical environment per se. It is what Halliday and Hasan (1976:18) call context of situation: "in instances where the key to the interpretaion is not ready to hand, in text or situation, the hearer or reader CONSTRUCTS a context of situation in order to supply it for himself". (127)-(129) are all quotes of part of a dialogue between participants in a traditional Erima narrative text. They illustrate exophoric reference to both the physical environment and the context of situation. For the father and son in (127), wo makes exophoric reference to the physical environment. But, since this is quoted speech in part of a narrative text, for the audience to whom the narrative was related, wo did not make exophoric reference to the physical environment. The individual telling the story did not point someone out to the audience. Instead the audience must supply the context of situation from the text. They must imagine the situation based on that portion of the narrative. This type of reference occurs often in discourse, where the hearer must construct an appropriate context in order to interpret the referential item. Another example of exophoric reference to the context of situation is:

(130) fai nganononga nere ulate wo golo-Ø
man two they side there walk-SR

bo-dere goy-a-re. Dogia ulate onoufe.
and-3d *go*-rp-3dS *Dogia side like*
Two men went walking (on the) distant side there. Like, (for example, from here to the other) side of Dogia (village).

In (130) the narrator uses wo in an exophoric way. wo has no anaphoric referent. The audience is not told where *there* is. The message communicated is that the two men went some distance away from their village. To help the audience construct the context of situation, the narrator adds the piece of information that the distance involved was equivalent to the distance from where the audience was sitting to the village of Dogia.

The following are examples of endophoric reference. (131) and (132) are specifically anaphoric reference:

(131) tei bitaro afo aro tuwa langa yaf-a-i.
possum big feet long branch on sit-rp-3sS

nere tei wa elege-du-Ø bo-de muju
they possum that get-TS-SR *and*-3p *flesh*

faae-boro-wa-ne.
butcher-completely-rp-3pS
(A) large possum (with) long legs sat on a (tree) branch. They got that possum and then butchered its flesh thorougly.

(132) ... fai nomo stori be.
man his story here
This (was) the man's story.

(132) occurs at the end of a narrative text, although it is not the closure device for the text. The deictic article be *this* has anaphoric reference to the entire preceding text.

One function of the deictic article wa is to signal closure of a text when used in conjunction with the clitics -fa and -nga:

(133) wa-fa-nga
that-emphatic-*just*
That (is) all.

All Erima discourses are closed in this way.

Turning now to cataphoric reference, only be is used to refer forward in text. Its most common cataphoric usage is in the opening of a text, as in:

(134) agage be-fa fai ete laanga la haga t-a-i.
story this-emphatic *man a beach at garden get*-rp-3sS
In this story, a man got (= planted) a garden at a beach.

(135) Laanga matane hiiri t-a-i, nomo asa.
Laanga village ocean get-rp-3sS *its narrative*

Wa be-neufe:
that this-like:
The story of Laanga village being taken by the sea is like this:

be is also used cataphorically to introduce quoted speech as in:

(136) bele ete fere le-nir-a-i be-neufe, "Ur-a-ru! ..."
talk one additional say-3dO-rp-3sS *this-like look*-C-2dS
He said an additional word to them like this, "Look! ..."

Whenever be is used to introduce a quotation, -neufe *like* must also occur.

As has been seen, English and Erima are similar in that that and its equivalent wa cannot be used cataphorically. If it turns out that wo *that, those*, and *there* (far distance) can occur endophorically, then a further dimension will be present in Erima anaphoric reference.

6.2 Tail-head linkage

A feature common to discourse structure in many languages of Papua New Guinea is *tail-head linkage*. A sentence will occur consisting of a series of medial form clauses, followed by a final form clause. When tail-head linkage occurs, the first clause or clauses in the next sentence will be a repetition of either the last clause of the preceding sentence, or the last few clauses of the preceding sentence, or a pro-verb which refers back to the last clause or clauses. (Parentheses around Erima indicate clause boundaries):

(137) (me-Ø) (afo-Ø dagi-Ø) (owo-Ø dagi-du-Ø)
come.down-SR *leg-his tie*-SR *arms-his tie*-TS-SR

(te-Ø) (matane ta-Ø man-a-ne). (mani-Ø)
get-pl *village get*-SR *go.up*-rp-3pS *go.up*-SR

(nebere feta mo wa la-nga taf-Ø-a-ne-nga)
their.pl *manhouse front there at*-emp *put*-TS-rp-3pS-DR

(inya-a-i).
be-rp-3sS
They came down, tied his legs, tied his arms, then took him and went up to the village. (They) went up, hung (him) up in the front of their manhouse, and (there) he stayed.
Free translation:
They came, tied his hands and legs, and then took him up to the village. Upon arriving they suspended him in front of the manhouse, and there he stayed.

(138) (matane la mai-Ø) (wa la ega kolili-du-Ø)
village at come.up-SR *there at again circle*-TS-SR

(man-a-ne). (kolili-du-Ø) (mani-Ø) (ega gi-du-Ø)
go.up-rp-3pS *circle*-TS-SR *go.up*-SR *again come.back*-TS-SR

(me-du-Ø) ...
come.down-TS-SR
(They) came up to (the) village, then circled there again and went up (away from the village). Having circled, (they) then went up, came back again (and) having come (back) down (to the village again and) ...
Free translation:
They came into the village, circled the central part of the village and went back out. Then they returned to the village again and ...

In (137) the last clause in the first sentence is repeated as the first clause of the second sentence (i.e. ... man-a-ne. Mani-Ø). In (138) the last two clauses of the first sentence are repeated as the first two clauses of the second sentence (i.e. kolili-du-Ø man-a-ne. Kolili-du-Ø mani-Ø ...). Note that when the final clause of the preceding sentence is repeated in the second sentence, that final form clause becomes a medial form clause. The actual repetition involves the verb root.

It is not always the case that tail-head linkage is achieved by repetition of the last clause or clauses. Just as pronouns have traditionally been described as substituting for nouns, so the verb ono- *do.thus* may function as a pro-verb, substituting for a clause, a sentence, or even a larger unit, providing tail-head linkage:

(139) nere magana hiiri mou wa golo-Ø-Ø bo-de
they children ocean shore there walk-TO-SR *and*-3p

le-wa-ne, "Tei aro, tei aro".
say-rp-3pS, *possum big, possum big*

Ono-Ø-wa-ne-nga nere fai hilou hilou mai-Ø
do.thus-TS-rp-3pS-DR *they men good good come*-SR

ure-du-Ø le-wa-ne, "Hilou ete-nga".
see-TS-SR *say*-rp-3pS, *good one*-emp
The children walked there, (at) the ocean shore, and said, "(A) big possum, (a) big possum!" (They) having done thus, the bigmen came, saw it, then said, "Very good!"
Free translation:

As the children walked along the beach they saw a possum and shouted, "A big possum! A big possum!" Hearing their shouting, the men came, looked at the possum and said, "Great!"

In (139) the pro-verb ono- substitutes for and refers back to the entire preceding sentence.

One of the functions of this tail-head linkage seen in the above examples is to provide cohesion between sentences by the repetition of lexical items. Another function is to slow down the rate at which new information is being introduced into the text.

This tail-head linkage has been briefly described as background for the following. In (137)-(139) the repeated clauses which initiate the second sentence of each example were clauses joined in a coordinate relationship via the clause chaining suffixes described in section 2.3. A different sort of tail-head construction also can occur as exemplified by:

(140) "Be fai umura, fai adifa mai-ta,"
here man old man where.from come-3sS.ip

goy-a-re. Goy-a-re wa, no yafa-g-a-i-nga
go-rp-3dS *go*-rp-3dS *that he sit*-TS-rp-3sS-DR

nere umege-Ø-wa-re-nga le-nir-a-i,
they frightened-TS-rp-3dS-DR *say*-3dO-rp-3sS

"Adai umege-waru. May-a-ru. Ji we
do.not frightened-C-2dS *come*-C-2dS *I myself*

yafa-Ø-ne", nir-a-i.
sit-pr-1sS 3dO-rp-3sS
"This (is) an old man, (a) man who has come from what place?", (they said and) went (over to him). Regarding that going of theirs, as he sat, they were frightened, then he said to them, "Don't (be) afraid! Come here! (It is) me sitting here", (he said) to them.
Free translation:
"Where did this old man come from?" they said, and then went over to him. Regarding that going of theirs, as he sat there they became frightened and then he said to them, "Don't be afraid! Come here! It's just me sitting here", (he said) to them.

Note that tail-head linkage occurs with the sentence ending with goy-a-re *go*-rp-3ds, and the one beginning with goy-a-re wa, which has been translated *regarding that going of theirs* in order to capture the topicalisation and nominalisation of the clause functioning as head in the tail-head linkage. What must be kept in mind, however, is that in the Erima the verb goy-a-re is not in a gerund form as in the English translation. It is identical in form to the final verb in the sentence preceding it, i.e. it is suffixed as a final form verb. And, as in the sentences examined in section 5, this clause is embedded in the head noun slot of a NP. Such NPs by virtue of being constituents of a tail-head linkage provide cohesion to the text. This cohesion is both referential due to the anaphoric usage of the deictic article and lexical via repetition of the verbs. In addition, such a NP is topic of its sentence.

This is contrastive with tail-head linkage in which the head clause (i.e., the first clause of the second sentence) is in a coordinate relation with the next clause, in which case it is not the topic of the sentence:

(141) "Be fai umura, fai adifa maita",
here man old man where.from come-3sS.ip

goy-a-re. Goy-Ø-a-re-nga no yafa-g-a-i-nga ...
go-rp-3dS *go*-TS-rp-3dS-DR *he sit*-TO-rp-3sS-DR
"This (is an) old man, (a) man who has come from what place?", (they said) and went (over to him). They went (over to him) and then, as he sat ...
Free translation:
"Where did this old man come from?" (they said) and then went over to him. They went over to him and then, as he sat there ...

In (141), goy-Ø-a-re-nga merely serves a cohesive function, whereas in (140) goy-a-re wa has the additional function of topic, acting as the framework within which the propositions to follow hold. Although at this point I have not completely analysed the structure of discourse in Erima, there is some evidence that a topicalised NP functioning as head in tail-head linkage signals an *episode break*. This is certainly true of one narrative text examined, but at present remains a tentative hypothesis.

Below are further examples of topicalised definite NPs as constituents in tail-head linkage, including pro-verbs embedded in the head noun slot of topicalised NPs marked as definite by the deictic article. In each case the topic NP also appears to signal the beginning of an episode. The examples are from the same text, and are sequential but not contiguous to each other in the text. Each one has several paragraphs separating it from the others:

(142) fai ete no done gamu golo-Ø-Ø bo-na
man a he jungle middle walk-TO-SR *and*-3s

goy-a-i. Ono-wa-i wa haya dauri itou
go.rp-3sS *do.thus*-rp-3sS *that plate dauri god*

no goi-Ø yefi la hamoi fasi-g-a-i.
he go-SR *adze with grubs pull.out-repeatedly*-rp-3sS
A man went walking in the middle of the jungle. Regarding that going of his (topic), the god of the dauri plate went (and) kept pulling out grubs (from a tree) with an adze.
Free translation:
Once a man went walking deep in the jungle and this is what happened there: the god of the wooden plates was chopping away at a tree and getting grubs out of it. And ...

(143) Haya dauri itou no done gamu goi-g-a-i-nga
plate dauri god he jungle middle go-TO-rp-3sS-DR

fai ngalenga haya wa aule-du-Ø bo-na
man real plate those shoulder-TS-SR *and*-3s

nomo matane goy-a-i. Goy-a-i wa nomo
his village go-rp-3sS *go*-rp-3sS *that his*

mata la-nga logosi-wa-i.
house at-3mp *stack*-rp-3sS

As (the) god (of the) dauri plates went in (the) middle (of the) jungle, (the) real man shouldered those plates and then went to his village. Regarding that going of his (topic), he stacked them at his house.

The god of the wooden plates went off deep into the jungle, and the man placed the plates on his shoulders and went back to his village. And this is what happened there: he stacked the plates in his house, and ...

(144) Nomo yefi te-Ø aule-du-Ø done gamu goy-a-i.
his adze get-SR *shoulder*-TS-SR *jungle middle go*-rp-3sS

Goy-a-i wa, haya dauri itou no hamoi fasi-Ø-Ø
go-rp-3sS *that plate dauri god he grubs pull.out*-TO-SR

bo-na
and-3s
He took his adze, shouldered it, then went (to the) middle (of the jungle. Regarding that going of his (topic), as the dauri plate god was pulling out grubs ...
Free translation:
With his adze on his shoulder, he went off into the middle of the jungle. And this is what happened: The god of the wooden plates was again pulling out grubs from a tree, and ...

(142)-(144) are the only occurrences of tail-head linkage in which the head is a topicalised NP in the narrative text about the god of the dauri plates. In (142) the transition which occurs is that of moving from the introduction of the text to the main body. In (143) a change of setting occurs, as well as a change of participants. The man's having stacked the plates he had obtained from the god of the dauri plates resulted ultimately in dire consequences. The man's brother sees the plates and wants to get some for himself. (144) occurs when the man's brother sets off to find the god and obtain plates for himself. Again a change of setting and participants occurs. In the end the man's brother is killed. This text has three episodes and each one is begun with tail-head linkage with a topicalised NP. This leads me to hypothesise that when a NP with an embedded final form clause is the head in a tail-head link, it is a signal that the sentence, paragraph, or larger unit preceding it becomes the topic for the following episode and marks the beginning of a new episode. (Topic in this sense does not refer to the subject matter, but rather the framework for the part of the discourse following it.)

7. TOWARD A CLASSIFICATION OF ERIMA ACCORDING TO THE LI AND THOMPSON TYPOLOGY

In forming language typologies there are various classificatory systems possible. For example, languages may be classified as to whether the object occurs before or after the verb, as in Lehmann (1978). However, a new typology has been proposed by Li and Thompson (1976) based on the classification of languages as *topic-prominent* versus *subject-prominent*. This system yields four possibilities: topic-prominent, subject-prominent, both topic and subject-prominent, or neither topic nor subject-prominent.

Li and Thompson claim that for some languages a more insightful analysis results when the notion of topic is taken to be basic to the language (1976:460).

Such languages are presumably topic-prominent. The previous sections of this study have illustrated Li and Thompson's claim in that a more simplified and, I believe, insightful analysis of the deictic articles in not only Erima, but in the other three New Guinean languages examined results when the data are viewed from a topic-comment perspective. This perspective not only simplifies the analysis of the deictic articles, but reduces the number of sentence types which must be posited for these languages.

The fact that the notion of topic results in a more insightful analysis in Erima suggests that Erima be examined to see if it is a topic-prominent language. Li and Thompson list eight diagnostic characteristics of topic-prominent languages. In this final section, Erima is examined in light of these characteristics in order to tentatively classify Erima according to the Li and Thompson typology.

7.1 Surface coding

The first characteristic of topic-prominent languages discussed by Li and Thompson is that of surface encoding. They state that in topic-prominent languages there will always be some sort of surface encoding for topics, such as sentence-initial position or topic markers, whereas subjects may or may not be encoded in the surface structure. Such is the case for Erima. As has been seen in the preceding sections, topics in Erima are always indicated by position, i.e., they are the left-most NP. On the other hand, subject NPs do not have a fixed position in the sentence (although they normally occur before the object), nor does some sort of a subject marker (e.g. a suffix or free morpheme) occur with Erima subject NPs. A NP is determined to be subject by appealing to the semantics of the sentence and its agreement with the subject person-number suffixes of the verb. For example, in (145) and (146) below,

(145) fai no yame babo war-a-i wa-fa ji ure-Ø-ne
man he my brother hit-rp-3sS *that*-emp *I see*-pr-1sS
The man who hit my brother (topic), *I see him.*

(146) fai no yame babo war-a-i wa-fa ji yerie-Ø-na
man he my brother hit-rp-3sS *that*-emp *I see*.1sO-pr-3sS
The man who hit my brother sees me.

the first NP (i.e., fai no yame babo warai wafa) functions as topic. In (145) it is the object as topic, and (146) it is the subject as topic. The only surface differences between the two involve the *verb*. In Erima the verb meaning 'to see' is suppletive, having nine forms according to the person (first, second, third) and number (singular, dual, plural) of the object. The object NP in both (145) and (146), therefore, is that NP co-referential with the verb root in person and number. The subject NP is that NP co-referential with the subject person and number suffix of the verb.

Topics in Erima have a distinct surface coding, namely position, whereas subject NPs do not.[12]

7.2 Passive constructions

Whereas passive constructions are common in subject-prominent languages, they are not widespread in topic-prominent ones. (Li and Thompson 1976:467). In Erima passive constructions do not occur at all.

7.3 'Dummy' subjects

Subject-prominent languages have 'dummy' or 'empty' subjects such as the English 'it' and 'there' as in (147) and (148):

(147) It is raining.

(148) There are five men walking down the road.

Such examples show the primacy of the notion of subject in subject-prominent languages; in these cases a subject is required even though it plays no semantic role (Li and Thompson 1976:467).

'Dummy' subjects do not occur in Erima. A sentence such as (147) is stated as:

(149) yaage me-Ø-na
rain come.down-pr-3sS
Rain comes down.

Other examples of Erima sentences which do not have 'dummy' subjects as in English are:

(150) ha agugu inyi-Ø-na
place darkness is-pr-3sS
The place is dark. or *It is dark.*

(151) be la ngaasu
here at hot
It is hot here.

(152) pusi ete haga la inyi-Ø-na
pussy a garden at is-pr-3sS
There is a cat in the garden.

Except for (150), the above examples are Erima equivalents of examples given by Li and Thompson.

7.4 'Double' subject

Sentences with the so-called 'double' subject are, according to Li and Thompson, "the clearest cases of topic-comment structures". (1976:468). This is because both topic and subject co-occur and there is no selectional *relation* between the topic and the verb. Some of the examples they give are:

(153) sakana wa tai ga oisii (Japanese)
fish top. *red snapper* subj *delicious*
Fish (topic), *red snapper is delicious.*

(154) nèike shù yèzi dà· (Mandarin)
that tree leaves big
That tree (topic), *the leaves are big.*

(155) tā tóu téng (Mandarin)
he head ache
He has a headache.

Li and Thompson believe that all topic-prominent languages have such sentences, and that no pure subject-prominent language does (1976:468).

In Erima, 'double' subjects do occur. Their most readily seen form is in predications involving body parts as was seen in the Mandarin example (155) above. An Erima example is:

(156) no mora-Ø mai-Ø-na
he head-his go.up-pr-3sS
He has a headache. Lit. *He* (topic), *his head goes up.*

In cases such as (156) it may not be clear to someone not familiar with Erima or languages like it whether the pronoun no is coreferential with the subject suffix of the verb until it is compared with sentences such as:

(157) ji (yame) mora-fe mai-Ø-na
I my head-my go.up-pr-3sS
I have a headache. Lit. *I* (topic), *my head goes up.*

The thing to note in (157) is that the subject person-number suffix on the verb is third singular. This shows that ji *I* is not the subject, but rather mora-*head* is the subject. ji is clearly a topic; it has no selectional relation with the verb, and it is not in agreement with the verb as far as person and number. (In this example and the ones below, the pronoun ji cannot be interpreted as a genitive for reasons given in note 9.) Other examples of 'double' subjects are:

(158) ji ogo-fe dige-ta
I stomach-my climb.up-3sS.ip
I am full. Lit. *I* (topic), *my stomach climbed up.*

(159) ji age-fe dige-ta
I eye-my climb.up-3sS.ip
I forgot. Lit. *I* (topic), *my eye climbed up.*

(160) ji au yari-Ø-na
I liver hits.me-pr-3sS
I feel compassion. Lit. *I* (topic), *(my) liver hits me.*

Sentences such as (160) were a mystery to me for a long time. It appeared to be a type of passive construction meaning *I was hit by my liver*, yet other 'passives' could not be found. Viewing this sentence from a topic-comment perpective has cleared up the problem, showing that it is not a passive at all.

7.5 Controlling coreference

Coreferential constituent deletion in topic-prominent languages is controlled not by the subject, but by the topic. Examples (from Mandarin) given by Li and Thompson (1976:469) are:

(161) nèike shù yèzi dà, suǒyi wǒ bu xǐhuān
that tree leaves big so I not like
That tree (topic), *the leaves are big, so I don't like it.*

(162) nèi kuài tián daòzi zhǎngde hěn dà,
that piece land rice grow very big
suǒyi ____ hěn zhìqián
so very valuable
That piece of land (topic), *rice grows very big, so it (the land) is very valuable.*

In both cases the deleted constituent has reference to the topic, not the subject.

Unfortunately, I have no data at the present to show whether or not topics control coreference in Erima.

7.6 V-final languages

According to Li and Thompson and others (1976:470), there is a tendency for topic-prominent languages to be verb-final. This is, as has been seen, the case for Erima since it is a SOV language.

7.7 Constraints on topic constituents

Topic-prominent languages have no constraints on what may be topic, whereas subject-prominent languages do. As an example showing such constraints, Li and Thompson give three Indonesian sentences (1976:470):

(163) Ibu anak itu membeli sepatu
mother child that buy shoe
That child's mother bought shoes.

(164) Ibu anak itu , dia membeli sepatu
mother child that she buy shoe
That child's mother, she bought shoes.

(165) Anak itu , ibu-nja membeli sepatu
child that mother-poss.suffix *buy shoe*
That child, his mother bought shoes.

(166) *Sepatu itu , ibu anak itu membeli
shoe that mother child that buy

In the above Indonesian examples, the subject in (163) becomes topicalised in (164), and the genitive of the subject in both of them becomes topicalised in (165). The object, however, cannot be topicalised as seen in (166). This limitation of what may be topicalised is a characteristic of subject prominent languages.

On the other hand, as can be seen from the following examples, there are no restraints in Erima as to which NP can be topicalised:

(167) magana wa-fa nomo anya su idada-wa-i
child that-emp *its mother shoe buy*-rp-3sS
That child's mother bought shoes.

(168) magana wa-fa nomo anya, no su idada-wa-i
child that-emp *its mother she shoe buy*-rp-3sS
That child's mother, she bought shoes.

(169) magana wa-fa, nomo anya su idada-wa-i
child that-emp *its mother shoe buy*-rp-3sS
That child, its mother bought shoes.

(170) su wa-fa magana wa-fa nomo anya idada-wa-i
shoe that-emp *child that*-emp *its mother buy*-rp-3sS
Those shoes, that child's mother bought (them).

Note that the ambiguity seen in (168) and (169) as to whether it is the genitive NP (i.e. yame magana) that is topic, or the whole possessive NP (i.e., magana wa-fa nomo magana) that is topic, is resolved by intonation.

From my knowledge of Erima I believe that all NPs in the language may be topicalised whether they function as subject, object, indirect object, location, or instrument. Since at the time of writing this section I do not have access to a native speaker, this assertion is tentative.

7.8 Basicness of topic-comment sentences

Regarding the basicness of topic-comment sentences in topic-prominent (Tp) languages, Li and Thompson (1976:471) state that

> ... perhaps the most striking difference between a Tp language and a non-Tp language is the extent to which the topic-comment sentence can be considered to be part of the repertoire of basic sentence types in the former but not the latter.

Topic-comment sentences in topic-prominent languages are considered basic because they are not derived from any other sentence type (1976:471). Although Li and Thompson concede that derivations can sometimes be formulated, they are not desirable since "the data which these Tp languages present are most naturally accounted for by taking the topic-comment sentences to be basic and not derived". (1976:471).

Assuming that topic-comment sentences are basic in Erima more naturally accounts for the features of the language than not assuming such. This was seen with the deictic articles and with sentences of the type exemplified by (156)-(160) in section 7.4.

A further illustration of the explanatory power of taking topic-comment structure to be basic in Erima concerns pronominal copy, a feature of many Papua New Guinean languages in which a pronoun optionally follows a noun phrase and is coreferential with it. Graham Scott in his grammar of Fore has a section on pronominal copy in his discussion of Fore phrase structure. He states that "a noun phrase may be followed by its pronominal copy, a devise particularly used when the noun phrase is long." (1978:100). One of his examples is:

(171)	temeni	nkaba:	ae	kana-y-e
	Temeni-oblique.case	*his.father*	*he*	*come-he*-indicative
	Temeni's father is coming.			

Note that Scott says the pronominal copy *may* occur (i.e., it is optional) and that it particularly occurs when the noun phrase is long. I would suggest that such 'long' noun phrases are topics, their length due to embedded clauses. This explains the pronominal copy — the pronoun is the subject of the clause filling the comment slot. If these cases of pronominal copy are indeed topic-comment, Scott's analysis could be simplified. The same holds for the analysis of Erima presented in Colburn (1979). In that analysis I posited an optional margin of pronominal copy for noun phrase structures. I now believe that data in which pronominal copy occurred were cases of topic-comment. Consider the two sentences below:

(172) yame babo um-a-i
my brother die-rp-3sS
My brother died.

(173) yame babo no um-a-i
my brother he die-rp-3sS
My brother (topic), *he died.*

Sentences such as (172) and (173) occur quite commonly. The difference in surface structure (i.e., the pronominal copy) demands explanation. That explanation, I have said, is topic-comment structure. In support of my claim that pronominal copy is a matter of topic-comment structure, consider (174):

(174) ji yame babo um-a-i
I my brother die-rp-3sS
I (topic), *my brother died.*

In (174) the pronoun ji functions as topic. Sentences such as (174) are heard quite frequently in discussions regarding an Erima speaker's family. However, an expression which has never been heard is (175):

(175) *(?) ji yame babo no um-a-i
I my brother he die-rp-3sS
I (topic), *my brother* (topic), *he died.*

I believe such a sentence as (175) cannot occur because two unrelated topics are encoded by it. If two or more NPs are topics of the same sentence, they must be coreferential and in an appositional relationship as in:

(176) Topic Topic

tere elebe magana nere be, heig-a-ne be,
you. now child they here arrive-rp-3pS *this*

Topic Comment

tere ure-Ø-ya be, nere ila onodu
you.pl *see*.pr-2pS *this they some like.this*

ada heige-Ø-de
not arrive-pr-3pS
These children here (topic), *these (ones who) have arrived* (topic), *these (ones who) you now see* (topic), *some of them did not arrive like this.*[13]

The assumption that topic-comment structure in Erima is basic solves many problems of analysis and simplifies the grammatical description. In addition, I see no evidence that topic-comment sentences in Erima should be considered to be derived from some other sentence type.

7.9 The classification of Erima

Of the eight characteristics of topic-prominent languages posited by Li and Thompson, Erima clearly has five of them: *surface encoding of topic, 'double' subjects, verb-final ordering,* and *lack of passive constructions* or *dummy subjects*. At present it is not known if topics control coreferential constituent deletion, and there is no evidence that topic constructions are derived from another sentence type. Finally, there does not appear to be any constraint on what can become a topic, though this needs investigation.

In light of this, how then should Erima be classified? It definitely has evidence in favour of its being classified as a topic-prominent language. However, I believe that Erima is not a pure topic-prominent language and should be instead classified as both topic- and subject-prominent. Although other reasons can probably be found, there are two features of Erima grammar which have been seen in earlier sections which establish the role of subject in the language. These two features are verb serialisation and switch reference.

Sentences with a series of coreferential clauses typically have a subject tagmeme manifested only in the first clause. Furthermore, except in certain cases, with such sentences only the final clause will indicate subject person and number. In such instances, the interpretation of the subject for each medial clause depends upon reference to the subject tagmeme of the first clause (if it is present) and/or reference to the subject person-number suffix of the final clause as seen in:

(177) ne matane mani-du-Ø le-tu-du-Ø ega
you village go.up-TS-SR *speak*-3sO-TS-SR *again*

gi-du-Ø m-a-u.
back-TS-SR *come*-C-2sS
You go up to the village, then tell him (and) turn back (and) come (here).

(178) me-Ø afo-Ø dagi-Ø owo-Ø dagi-du-Ø
come-SR *foot*-3sP *tie*-SR *hand*-3sS *tie*-TS-SR

te-Ø matane ta-Ø man-a-ne.
get-SR *village get*-SR *go.up*-rp-3pS
They came, tied his feet, tied his hands, (and) then got him (and) went to (the) village.

As stated above, the notion of subject is not only relevant in verb serialisation, but in, of course, switch reference. Switch reference is entirely dependent on the notion of subject since the subject referent of each clause is monitored and each verb has a suffix indicating whether or not its subject is coreferential with the next clause. Examples of switch reference were given in section 2.3 so will not be given here.

My tentative conclusion, therefore, regarding the classification of Erima according to the Li and Thompson typology is that Erima is both topic and subject-prominent.[14]

Although I have used Li and Thomspon's criteria for determining whether a language is topic-prominent or subject-prominent, I have reservations about certain features they claim are indicative of topic-prominent languages. Specifically, I question their assertion that a language that lacks passives and has a final position verb indicates that it is a topic-prominent language. Lehmann (1978:22) states that the prominence of passives is a characteristic of SVO languages, and the lack of passives a characteristic of SOV languages. Li and Thompson, as noted above, say that a characteristic of topic-prominent languages is that they tend to be verb-final. If this is the case, then we would expect such languages to lack passives simply because they are verb-final languages. Therefore I regard Li and Thompson's use of the lack of passives and final position of the verb to both be indicative of a topic-prominent language as being circular in reasoning. According to Lehmann we expect a verb-final language to lack passives, so how does a lack of passives indicate a topic-prominent language since topic-prominent languages are usually verb-final anyway?

One feature, however, which I do believe is valid as an indicator of topic-prominent languages is that of dummy subjects. Subjects play such an important role in subject-prominent languages that a subject is necessary even when it has no semantic content as in 'It is raining'.

Li and Thompson's typology is interesting and I think it is worth pursuing, although certain features which they list for topic-prominent versus subject-prominent languages seem to be inconclusive.

Finally, I want to call attention to an assertion which has been made by Longacre (1980:29) that in establishing a topic- versus subject-prominent typology it is important to take into account the discourse types which topics occur in, and in comparing languages, there should be a consistency as to what discourse type is being examined in each of the languages. Longacre believes that except for embedded exposition, topics are rare in narrative discourses, but are a prominent feature of expository discourses. Therefore, if expository texts were examined in one language, but only narrative in another, the analyst might be led to believe one language was topic-prominent and the other not. Since I only recently have had access to Longacre's article, I have not been able to pursue this claim as far as Erima discourse and topics are concerned.

8. CONCLUSION

Before actually beginning this study my goal was to discover why the Erima deictic articles seem to have so many functions and meanings. I also had hoped to determine the function and meaning of the clitic -fa, which optionally occurs with the deictic articles in their non-locative function. Unfortunately, I still have no idea what -fa means or does in Erima. I am, however, satisfied that the deictic articles do not have as many meanings and functions as a first look indicates, or as some linguists have claimed. The deictic articles have been found to be constituents of topic-comment constructions. They occur as the determiner in topicalised NPs.

A by-product of this study has been evidence that the notion of topic-comment is extremely productive in the analysis of the language. Not only does the notion of topic-comment simplify the analysis of the deictic articles, it significantly reduces the number of sentence types that must be posited for the language. I believe that I now have a better grasp of the sentence level constructions of the language and have gained a good entry into levels beyond the sentence. Future study will focus on a detailed analysis of the function of topics in Erima discourse. Related areas which need investigation are the notions of givenness, theme-rheme, and background versus foreground information.

The fruitfulness of the application of the notion of topic-comment structure to the analysis of constructions composed of final-form clause plus deictic article in Erima, as well as the many characteristics which Erima shares with topic-prominent languages suggest that topic-comment may play an important role in Siroi, Waskia, and Suena, as well as in other Papua New Guinea languages in which the deictic articles seem to have many functions and meanings.

ABBREVIATIONS

Erima

adv	adverb
ARP	axis-relator phrase
CA	completed action
det	determiner
DR	different referent follows
f	future
F Cl	final clause
hab	habitual
HN	head noun
ip	immediate past tense
loc	locative
Mar	margin
M Cl	medial clause
nom	nominaliser
NP	noun phrase
obj	object
p	past
pr	present tense
pred	predicate
pl	plural
r	relator
RC	relative clause
subj	subject
rp	remote past tense
SR	same referent follows
TO	temporal overlap
TS	temporal succession
1sP	1st singular possessive
1sS	1st person singular subject
2sS	2nd singular subject
3dS	3rd dual subject
3sO	3rd singular object
3sS	3rd singular subject
2pS	2nd person plural subject
∅	zero morpheme
/	pause
//	final pause

Siroi

B1	Base 1
B2	Base 2
cm	class marker
dep	dependent
fu	future
int	intention
ip	immediate past
Li	link
O	object
P	predicate
pa	past
po	potential
pr	present
rel	relator
S	subject
spec	specific clitic
1d	1st dual
1p	1st person plural
3s	3rd person singular
3d	3rd person dual

Waskia

c	connective
cd	connective, different subject
cond	conditional
cs	connective, same subject
des	desiderative
imp	imperative
ps	past simple tense
1s	1st person singular
3s	3rd person singular

NOTES

1. Each time I introduce a technical term I follow the convention of underlining it. Subsequent occurrences of that term are not underlined.

2. For a similar analysis see Kramsky 1972:18ff. Givón (1976:157) believes that in the Bantu languages of Africa also the definite article derived from demonstratives.

3. I am using these terms in a way different from Bloomfield's (1933:194) classification of resultant phrases.

4. Throughout the paper, parentheses around Erima examples indicate clause boundaries.

5. Throughout the paper, in interlinear translations, a hyphen indicates morpheme boundaries, and two or more words conjoined by a period (e.g. third.sing) indicate either that that item is a portmanteau morpheme as in ure- *see.him*, or that two or more words are required to render it into English. For example, the Erima verb root faga- requires two English words to translate it. Hence it is rendered as *run.away*.

6. ure- in (15) changes to ur- in (16) due to morphophonemic changes. A verb root ending in a vowel loses that vowel if the suffix following it is also a vowel.

7. It is interesting to note that according to Schachter (1973:25), Illonggo, a Philippines language, uses the lexeme ang as marker of both relative clauses and topics. This shows that the phenomenon that is the topic of this paper may perhaps occur in other non-New Guinean languages.

8. The tree diagrams which follow are not to be taken as the phrase markers of transformational grammar. They are merely convenient ways of presenting the structure of the examples given.

9. In (87) and (88), ji *I* is not to be mistaken as being in a genitive relationship with the noun following it. This is seen by such examples as:

ji yame	ogo-fe	dig-a-i	
I my	*stomach*	*climb.up*-rp-3sS	*I am full.*
ji yame	babo	um-a-i	
I my	*brother*	*die*-rp-3sS	*I, my brother died.*

   In these examples the pronoun ji clearly is not in a genitive relationship with the noun following it.

10. This would include differences in tense.

11. One case does occur in a text that an Erima speaker transcribed for me. This was the first text he had ever transcribed and he occasionally makes mistakes in his transcription. Since I do not have access to a native speaker or the tape of the text at this time, I cannot confirm whether wo is correct in the text or not.

12. It can be argued, however, that a form of surface encoding of the subject takes place in agreement between the subject NP and the subject person-number suffixes of the verb. My point, however, is that there is no way to identify the subject NP by its position in a clause or by some sort of a case marker occurring with the subject NP.

13. This sentence makes no sense without the context. It comes from a text regarding male initiation. The leader is saying, "Now you see they are men. Some of them came to the initiation not as men, but as children". The onodu *like.this* refers to their manhood.

14. Another language which has been classified as both topic- and subject-prominent is Japanese. (cf. Li and Thompson 1976.)

BIBLIOGRAPHY

ANDERSON, Stephen

1976 On the notion of subject in ergative languages. In Li, ed. 1976: 1-23.

BEEKMAN, John and John CALLOW

1979 The semantic structure of written communication. MS. Dallas: Summer Institute of Linguistics.

BLOOMFIELD, Leonard

1933 *Language.* London: George Allen & Unwin.

CHAFE, Wallace L.

1976 Givenness, contrastiveness, definiteness, subjects, topics, and point of view. In Li, ed. 1976:25-55.

CHOMSKY, Noam

1965 *Aspects of the theory of syntax.* Cambridge, Mass: M.I.T. Press.

CHRISTOPHERSEN, Paul

1939 *The article: a study of its theory and use in English.* London: Oxford University Press.

COLBURN, Michael A.

1979 Erima grammar essentials. MS. Ukarumpa, Papua New Guinea: Summer Institute of Linguistics.

DOWNING, Bruce T.

1978 Some universals of relative clause structure. In Joseph H. Greenberg, ed. *Universals of human language,* vol.4. *Syntax,* 375-418. Stanford: Stanford University Press.

DUCROT, Oswald

1972 *Dire et ne pas dire: principes de sémantique linguistique.* Paris: Hermann.

FILLMORE, Charles J.

1975 *Santa Cruz lectures on deixis.* Indiana: Indiana University Linguistics Club.

FRIEDMAN, Lynn A.

1976 The manifestation of subject, object, and topic in American sign language. In Li, ed. 1976:125-148.

GIVÓN, Talmy

1976 Topic, pronoun, and grammatical agreement. In Li, ed. 1976:149-188.

GUNDEL, J.M.

1975 Left-dislocation and the role of topic-comment structure in linguistic theory. *Ohio State University Workpapers in Linguistics* 18:72-131.

HAIMAN, John

1976 Presuppositions in Hua. *Papers of the Chicago Linguistic Society* 12:258-270.

1978a A study in polysemy. *Studies in Language* 2/1:1-34.

1978b Conditionals are topics. *Language* 54/3:564-589.

HALLIDAY, M.A.K and Ruqaiya HASAN

1976 *Cohesion in English*. London: Longman.

HOCKETT, Charles

1958 *A course in modern linguistics*. New York: Macmillan.

KEENAN, Edward L. and Bernard Comrie

1977 Noun phrase accessibility and universal grammar. *Linguistic Inquiry* 8:63-99.

KEENAN, Elinor Ochs and Bambi B. SCHIEFFELIN

1976 Topic as a discourse notion: a study of topic in the conversations of topic in the conversations of children and adults. In Li, ed. 1976:335-384.

KRÁMSKÝ, Jiří

1972 *The article and the concept of definiteness in language*. The Hague: Mouton.

LEHMANN, Winfred P.

1978 The great underlying ground-plans. In Winfred P. Lehmann, ed. *Syntactic typology*, 3-55. Austin: University of Texas Press.

LI, Charles N., ed.

1976 *Subject and topic*. New York: Academic Press.

LI, Charles N. and Sandra A. THOMPSON

1976 Subject and topic: a new typology of language. In Li, ed. 1976: 457-489.

LONGACRE, Robert E.

1972 *Hierarchy and universality of discourse constituents in New Guinea languages* vol.1: *Discussion*. Washington, D.C.: Georgetown University Press.

LONGACRE, Robert E.

1980 Discourse typology in relation to language typology. MS. University of Texas at Arlington and the Summer Institute of Linguistics, Dallas.

LYONS, John

1968 *Introduction to theoretical linguistics*. Cambridge: Cambridge University Press.

1975 Deixis as the source of reference. In Edward L. Keenan, ed. *Formal semantics of natural language*, 61-83. Cambridge: Cambridge University Press.

1977 *Semantics*. 2 vols. Cambridge: Cambridge University Press.

MAXWELL, Daniel N.

1979 Strategies of relativisation and NP accessibility. *Language* 55:352-371.

REESINK, Ger. P.

1978 Conjunctions in Usan. MS. Ukarumpa, Papua New Guinea: Summer Institute of Linguistics.

1979 Some typological features of PNG languages with focus on the relative clause. MS. Ukarumpa, Papua New Guinea: Summer Institute of Linguistics.

1980 Being negative can be positive. MS. Ukarumpa, Papua New Guinea: Summer Institute of Linguistics.

ROSS, Malcolm, with John Natu PAOL

1978 *A Waskia grammar sketch and vocabulary*. *PL*, B-56.

SCHACHTER, Paul

1973 Focus and relativisation. *Language* 49:19-46.

SCOTT, Graham

1978 *The Fore language of Papua New Guinea*. *PL*, B-47.

SGALL, Petr, Eva HAJIČOVÁ and Eva BENEŠOVÁ

1973 *Topic, focus, and generative semantics*. Kronberg: Scriptor.

WELLS, Margaret A.

1979 *Siroi grammar*. *PL*, B-51.

WILSON, Darryl B.

1974 Suena grammar. *Workpapers in Papua New Guinea languages* 8:1-170. Ukarumpa, Papua New Guinea: Summer Institute of Linguistics.

Z'GRAGGEN, J.A.

1975 *The languages of the Madang district, Papua New Guinea*. *PL*, B-41.

IMONDA PART-OF-WHOLE MARKING

W. Seiler

1. INTRODUCTION

This article[1] is examining the role of the suffix -l in Imonda, a Papuan language of the West Sepik Province.[2] This suffix is hard worked in the language, fulfilling a number of functions one of which is that of part-of-whole marking. Before delving into a detailed examination of the various uses of -l, I will briefly mention the most important typological characteristics of the language.

Like many other Papuan languages Imonda is heavily verb orientated. Subject, object, recipient, benefactive, possessor and accompanier NP are cross-referenced on the verb. This extensive agreement marking helps keep track of NPs in discourse where they are 'freely' deleted. Clauses often consist of nothing else but a verb. A covert noun-classification system by means of verbal prefixes (arisen from a reinterpretation of serial verbs) serves the same purpose as the cross-reference marking. In contrast to the verb, the NP is comparatively simple. There is no concord or number marking.[3] The function of NPs in the clause is indicated by means of case markers which follow the last word of the NP. Case markers may themselves be followed by topic or question suffixes.

On morphosyntactic grounds Imonda stems can be divided into three major classes: verbs, adverbs and nominals. All nominals may act as head of a NP and may host case marking.[4] Nominals are themselves subdivided into adjectives, kinship terms, nouns, pronouns and quantifiers.

2. THE OCCURRENCE OF -l WITH NOMINALS

All non-derived adjectives end in -l:

ebes-l	*good*	hute-l	*short*[5]
kulõ-l	*old*	efs-l	*flat*
nëme-l	*new*	tit-l	*ignorant*
së-l	*sharp*	fõku-l	*ripe*
mi-l	*blunt*	gege-l	*white*

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With some adjectives -l occurs obligatorily, while with others it is optional:

(1) mënа hute(-l)
road short-NOM
a short road

(2) õflõ së -l
knife sharp-NOM
a sharp knife

All adjectives, however, lose their -l when they are suffixed with -nam to derive an adverb or when they occur in predicative position with the pro-verb fe *make, do*, used as an existential verb:

hute-l > *short* hute-nam > *short*
së-l > *sharp* së fe > *sharp*

In addition to adjectives, -l occurs with a great many nouns which denote a part of a whole, or which are otherwise 'relational'. These are discussed here in the following categories: body parts, kinship terms and other cases.

2.1 Body parts

If the body part is linked to its possessor by means of the possessive marker -na, then it occurs with -l where the possessor is [-Human] and without -l where it is [+Human]:

(3) ehe-na ta (*ta-l)
3 -POS *hair*
his hair

(4) tetoad-na ta -l (*ta)
bird -POS *feather*-NOM
bird feathers

In a compound construction, however, -l must not occur: tetoad ta (*ta-l) *bird feathers*.

Human body parts appear with a final -l when they are used as objects:

(5) õme -l tëla -l -m fa-i -uagl-ni -n
vagina-NOM *husband*-NOM-GL CL-LNK-*go* -BEN-PST
They took her vagina to her husband.

A few body parts have developed a meaning difference between the form with -l and the one without it:

ekukõ *faeces* vs. ekukõ-l *bowels*

tëlp *urine* vs. tëlpo-l *bladder* (final -o is reduced or completely eliminated in the short form)

tõf *blood* vs. tõfo-l *skin* (same vowel reduction) (tõfo-l is the form consistently given on elicitation, but in connected speech tõf can also be heard)

im(-u) *anus* vs. imu-l *last part of digestive tract*

nih *body* vs. nih-l *meat*

õmõ *pubic area* vs. õmõ-l *buttocks*

2.2 Kinship terms

Kinship terms are clearly relational and all end in -l. In contrast to body parts, however, they must occur with -l if possessed:

(6) ka-na di -l
l -POS *younger brother*-NOM
my younger brother

As terms of address they shed their -l: afa! *mother!*

Notice the difference between agõ *woman* and agõ-l *wife*.

In the same category as kinship terms belong the two words for *ghost, soul, spirit, devil*, i.e. sugõ and sebuhe:

(7) sebuhe ha-pia -n
ghost MO-*come*-PST
A ghost came.

A ghost is a dead person's soul that appears in human shape. In example (7) it is immaterial whose soul it is; it is simply an enemy. But if it is possessed, then: ehe-na sebuhe-l *his soul.*

2.3 Other cases

Objects which are perceived as being part of a whole generally end in -l. This is especially true of parts of trees and plants but to some extent also of man-made objects. If such parts occur as NP heads, they must have -l:

kël a-l *branch*
pël a-l *root*
mõfo-l *fruit*
aga-l *handle*

If they occur as the second part of a compound, then the -l is dropped; so for instance with ti *tree* or udõ *netbag*:

ti kël a *branch*
ti pël a *root*
udõ aga *netbag handle*

Where a possessive paraphrase is possible the possessed part must have -l, so for instance: ti-na kël a-l. These items are therefore exactly parallel to [-Human] body parts, as discussed above.

The nouns pël a-l *root* or kël a-l *branch* refer to parts of the noun ti *tree*. Here the actual lexemes for the whole and for the parts are different. There are however a few cases where the part is referred to by the same lexeme as the whole, but with the suffix -l. This is so in the case of some fruits, where the -l form refers to the edible part of the fruit:

sa *coconut* vs. sa-l *coconut meat*
fo *banana* vs. fo-l *edible part of banana*

But it also occurs with other nouns:

ti *tree* ti-l *tree trunk*

In the above examples, and in most instances quite generally, there is a part-whole relation. But there are other cases where there is only a relation

'of some sort', such as in the following example where the first stem in the compound indicates the cause of the second stem:

(8) fal mal or: fal-na mal-l
spear scar -POS -NOM
spear scar

Let us now look at a few nouns that do not normally display the -l alternation:

ièf	*house*
pafeia	*stone*
sapoh	*tobacco*
atha	*sugarcane*
mëna	*road*
udõ	*netbag*

All of the above and countless others have the characteristic that they are not typically part of something else. With the last item, udõ *netbag*, this was true at least until European culture began to intrude. At that stage people were introduced to trousers and pockets and, in extension, udõ started to be used to refer to pocket. But as pocket is typically a part of a whole, udõ was transferred into the -l category.

Another excellent example that illustrates the relational character of -l is provided by po *water*. When po is used to refer to general water, rain or creeks it has no -l. When it refers to *wound water* (i.e. *suppuration*) or *coconut water* it does end in -l.

It appears that theoretically any noun may be suffixed with -l when it becomes relational. This becomes apparent where someone's soul assumes the shape of an animal or, infrequently, any physical object:

(9) aia -na koi -l
father-POS *cassowary*-NOM
father's cassowary, i.e. *father in the shape of a cassowary*

In a simple possessive relationship there is no -l: aia-na koi *father's cassowary*, i.e. *the one he looks after.*

2.4 Adjectives versus part-of-whole nouns

From the foregoing discussion it is clear that there is a close parallel between adjectives and nouns. Nevertheless they are equally clearly distinct on semantic and syntactic grounds. While both adjectives and nouns may head a NP, only the latter may do so felicitously in an 'out-of-the-blue' context:

(10) sapoh (*ebes-l) ka-m fa-ai -h -u
tobacco (*good*-NOM) 1 -GL CL-*give*-REC-IMP
*Give me tobacco (*the good one)!*

Syntactically, adjectives are distinguished from nouns on the following basis. First, they may not be possessed:

(11) agõ -ianèi-na / *ebes-l -na udõ
women-NPL -POS/ *good*-NOM-POS *netbag*
*the netbag of the woman/*the good one*

Second, adjectives differ from part-of-whole nouns by their inability to form a possessive paraphrase:

(12) koi ale
cassowary egg
cassowary egg

(13) koi kulõ
cassowary old
an old cassowary

(14) koi -na ale-l
cassowary-POS *egg*-NOM
cassowary egg

(15) *koi -na kulõ-l
cassowary-POS *old* -NOM
an old cassowary

Third, part-of-whole nouns in a compound may not end in -l, whereas attributive adjectives either must have -l (e.g. ebes-l *good*), or may have it (e.g. kulõ-l *old*). Fourth, the pro-verb fe *make, do* may only be used as an existential verb with certain adjectives, yet never with nouns:

(16) ebes fe-f
good do-PRS
it is good

(17) *tòf fe-f
door do-PRS
it is a door

3. NOMINALISATION

In addition to functioning as a marker of part-of-whole nouns and adjectives, -l also derives nominals from adverbs and verbs.

3.1 Adjectivalisation

Verbs may be turned into adjectives by suffixing -l to the stem. Intransitive verbs derive adjectives that correspond to English present participles while transitive verbs derive adjectives that correspond to English past participles:

A: Intransitive verbs:

iaha *die* > iaha-l *dying sick*
tagla *go round* > tagla-l *walking*

This is not a freely productive process and those verbs that may take -l have to be listed in the lexicon. There are also cases of serialised stems that may undergo adjectivalisation:

tagla-saihõ *go round-enter*, i.e. *toddle* > tagla-saihõ-l *toddling*

These derived adjectives behave like primary adjectives in every respect; for instance, they may take case marking but may not be modified by adverbs:

(18) mòd kusi -puhõ -l -ia
plenty gather-come up-NOM-CAU
Because of the many people who gathered,

pël adeia së e -fe-i -me
ICL *work* NEG DL-*do*-PST-NEG
we did not do any work.

(19) *mòd õm kusi -puhõ -l -ia
plenty yesterday gather-come up-NOM-CAU
because of the many people who gathered yesterday

(20) mòd õm kusi -puhõ -fan
plenty yesterday gather-come up-PER
Plenty of people gathered yesterday.

B: Transitive verbs:

Transitive verbs derive adjectives very productively:

tëta puis *cut meat* > tëta puis-l *the cut meat*
ti he *chop a tree* > ti he-l *a chopped down tree*
sapoh këklfe *roll a smoke* > sapoh këklfe-l *a rolled smoke*

Derived adjectives behave like ordinary adjectives:

(21) uisafõ uõl -l -ia po feha-lõh-f
crocodile shoot-NOM-CAU *water fall*-DUR-PRS
It keeps raining because they shot a crocodile.
(because of the shot crocodile)

Derived adjectives may also head a NP:

(22) ka ka-f -na uõl -l -fa ka maim fa-ne -f
1 1 -EMP-POS *shoot*-NOM-TO 1 *anyway* CL-*eat*-PRS
The prey shot by myself I eat anyway.

3.2 Clausal NPs

Goal NPs of motion verbs and benefactive or object NPs of certain verbs may consist of a clause. As far as the former are concerned, there are three strategies to mark the verb of the goal clause. It may be suffixed with the combination of locative and goal markers, which is the usual way of marking goal NPs:

(23) tõbtõ soh -ia -m ka uagl-f
fish search-LOC-GL 1 *go* -PRS
I am going to search for fish.

Alternatively, the verb may be nominalised with -l and then further suffixed with the goal marker:

(24) tõbtõ soh -l -m ka uagl-f
fish search-NOM-GL 1 *go* -PRS
I am going to search for fish.

The third option is for the goal marker to be directly suffixed to the verb stem:

(25) tõbtõ soh -m ka uagl-f
fish search-GL 1 *go* -PRS
I am going to search for fish.

In the above example all three possibilities are equally possible, without any meaning difference. The nominalised version is unmarked and always possible whereas the other two constructions may or may not be acceptable depending on the verb. There is also some variation among speakers in this respect. Here are two other examples featuring the construction involving the nominaliser -l:

(26) põl nëhe -l -m uagl-f
fence construct-NOM-GL *go* -PRS
I am going to build a fence.

(27) nõ -l ulõ -l -m at uagl-n
seed-NOM *plant*-NOM-GL COM *go* -PST
He has gone planting seeds.

A very small number of non-motion verbs may take a clausal benefactive or object NP. As is the case with all clausal NPs, it usually consists only of a verb or a verb and its object. The verb is nominalised and further suffixed with the goal marker. Of the following examples the first two show benefactive clausal NPs and the third one is an instance of an object clause:

(28) ha-pia -l -m õ -fna
MO-*come*-NOM-GL *say*-PRO
He was talking of coming.

(29) õh-nèi fla-fia-l -m ka tit fe-f
PX-SRC CL -*get*-NOM-GL 1 *ignorant do*-PRS
I do not know how to get this out.

(30) mëna adeia fe-l -m fe-f
road work do-NOM-GL *do*-PRS
He is about to do some work on the road.
(fe plus clausal object = *be about to*)

3.3 Adverbs

Adverbs are defined as those non-verbal items that may take affixation but not case marking. However, they may be nominalised with -l and then accept case marking. The following three examples show nominalised adverbs in a reduced conditional clause suffixed with the locative marker -ia (example (31)) and as beneficiaries of the verb *say*, suffixed with the goal marker -m (examples (32) and (33)):

(31) tõgõ-l -ia -fa ka uagl fe-f
thus-NOM-LOC-TO 1 *go* *do*-PRS
If so, I will go.

(32) nõmot ne adeia fe-l -m õ -fna
before 2 *work* *do*-NOM-GL *say*-PRO
Before you were talking about doing work

iauõ haifõ auaia-l -m õ -f
now again no -NOM-GL *say*-PRS
and now you say no again.

(33) õm -l -m õ -fna
yesterday-NOM-GL *say*-PRO
I was talking about yesterday.

4. SECONDARY OCCURRENCE OF -l WITH NOMINALS

The primary use of -l with nominals is that of an adjective and part-of-whole marker, as discussed above in 2. In addition to this, it also fulfils other syntactic functions on nominals, as is shown in the following sections.

4.1 'As'

A productive syntactic process is the suffixing of nouns with -l, resulting in the meaning of 'as, in the shape or function of what the noun refers to'. For reasons unknown the goal marker -m is further suffixed to -l in almost all cases:

(34) ka-m na -l -m hi -u
1 -GL *sago*-NOM-GL *cut*-IMP
Fell me as a sago tree!

(35) ka-m tëla -l -l -m lõh -n -u -è
1 -GL *husband*-GL -NOM-NOM *stand*-BEN/NS-IMP-D
Be our husband (stand up for us as a husband)!

(The first instance of -l marks the noun as relational.)

(36) if ta -l -m põt-eha-n
breadfruit head-NOM-GL CL -*put*-PST
He put a breadfruit as head.

(37) nõmot ti he -na -ba, tëh -l -m
before tree cut-PST-TO *firewood*-NOM-GL
Having chopped down the tree earlier,

agõ at f -ia -n
women COM CL-*get*-PST
the women have collected it as firewood.

(38) ed-nèi-m agõ -l -l -m f -ia -fan
PX-SRC-GL *woman*-NOM-NOM-GL CL-*take*-PER
He took her as his wife.

(The first instance of -l marks the noun as relational: agõ *woman* > agõ-l *wife*.)

In the above examples the occurrence of the goal marker -m is obligatory. With pia *come* and puhõ *come up* it is optional:

(39) sali -l (-m) ha-pia -fan
bandicoot-NOM(-GL) MO-*come*-PER
He came as a bandicoot.

4.2 Pronouns and proper nouns

Personal pronouns and proper nouns may be suffixed with -l and again further with the goal marker -m, deriving *as X's* where X is the referent of the nominal:

(40) sa mugõ ka -l -m põt-eha-u
coconut one 1 -NOM-GL CL -*put*-IMP
"Put a coconut as mine!"

Note that ka-l-m is not the beneficiary of the verb and there is no number agreement. This is in contrast to the following, where the -m marked NP is the beneficiary and is therefore cross-referenced on the verb:

(41) sa mugõ ka-m põt-eha-na -u
coconut one 1 -GL CL -*put*-BEN-IMP
Put a coconut there for me!

Another example:

(42) õh-nèi be-f -l -m põt-i -uagl-u
PX-SRC 2 -EMP-NOM-GL CL -LNK-*go* -IMP
Carry this as yours!

4.3 Numerals

The object in Imonda is formally defined on the basis of case marking and cross-reference marking. Apart from the 'ordinary' object, there is a second type of object. This is formally marked like an object but is semantically clearly peripheral and does not belong to the verb frame. It indicates the frequency of the event or action expressed by the verb. This 'peripheral object' is ordinarily not case marked. The numeral sabla *two*, however, when functioning as a peripheral object, ordinarily adds the combination of nominaliser plus goal marker:

(43) sabla-l -m ka uagl-ual-n
two -NOM-GL 1 *go* -DL -PST
I went twice.

5. OTHER USES OF THE NOMINALISER

There are two more uses of -l that must be mentioned. First, an ascriptive predicate may consist of any nominalised part of speech (apart from particles) which is further suffixed with the goal case marker. In rough terms this construction may be glossed as 'destined to be what is referred to':

(44) abu -l fo õh-fa, abu -l -l -m
ripe-NOM *banana* PX-TO *ripe*-NOM-NOM-GL
This is a type of banana that is eaten when ripe, it is destined to ripen.

(45) pon ne-m haifõ ha -f -me? ha -l -m -huef
hunger 2 -GL *again affect*-PRS-Q *affect*-NOM-GL-EMP
Are you hungry again? *Bound to be hungry.*

Second, there are certain adverbs that end in -l-m:

mag-l-m *why* (mag *one, another one*)
lohnam-l-m *completely* (lohnam does not occur independently)
snõpõ-l-m *well* (snõpõ does not occur independently)
iõspõs-l-m *deceptively* (iõspõs fe *to deceive*)
anuõ-l-m / anuõk-l-m / anuõ *often*

6. CONCLUSION

As has become apparent from the foregoing discussion, the suffix -l is of considerable importance. It functions as a part-of-whole marker on nouns, it marks all adjectives, it functions as a nominaliser and has secondary functions on nominals. At least some of the other languages of the Waris family feature a cognate morpheme with roughly the same sort of functions. The languages for which this has been verified are Waris, Daonda, Simog, Punda and Sowanda. More research is needed to ascertain whether this highly interesting feature is confined to the Waris language family or whether it also occurs in the other language families of the Border Stock, of which the Waris family is a member.

ABBREVIATIONS

BEN	benefactive	NP	noun phrase
CAU	causal	NPL	non-plural
CL	classifier	NS	non-singular
COM	completive	PER	perfect
D	distance	POS	possessive
DL	dual	PRO	progressive
DUR	duration	PRS	present
EMP	emphatic	PST	past
GL	goal	PX	proximity
ICL	inclusive	Q	interrogative
IMP	imperative	REC	recipient
LNK	link	SRC	source
LOC	locative	TO	topic
MO	motion	1	first person
NEG	negative	2	second person
NOM	nominaliser	3	third person

NOTES

1. I wish to thank Jeff Siegel for comments on this paper.
2. Imonda is a Papuan language spoken by approximately 275 people in the West Sepik Province of Papua New Guinea. It belongs to the Waris family of languages which straddles the border with Irian Jaya, at present a province of Indonesia. Wordlists have been collected and partly published of all of the Waris languages (for references see Voorhoeve 1971 and 1975; Laycock 1973). The only in-depth study to date on aspects of any of the Waris languages is by Brown (1981).
3. A handful of human nouns show non-singular marking by means of the suffix -ianèi, which is otherwise used as the source case marker.
4. With the exception of intensifiers (a subgroup of adjectives), which may not occur as head, but may receive case marking.
5. The transcription uses IPA symbols with the exception of h, which stands for the velar fricative x, and the following vowels:

   ò = ɔ õ = ɒ è = ɛ ë = ə ã = æ

BIBLIOGRAPHY

BROWN, Robert

1981 Semantic aspects of some Waris predications. In K.J. Franklin, ed. *Syntax and semantics in Papua New Guinea languages*, 93-123. Ukarumpa: Summer Institute of Linguistics.

LAYCOCK, Donald C.

1973 *Sepik languages - checklist and preliminary classification.* *PL*, B-25.

SEILER, Walter

1984 The main structures of Imonda - a Papuan language. Ph.D thesis. Australian National University.

VOORHOEVE, C.L.

1971 Miscellaneous notes on languages in West Irian, New Guinea. In *Papers in New Guinea linguistics* 14. *PL*, A-28:47-114.

1975 *Languages of Irian Jaya: checklist. Preliminary classification, language maps, wordlists.* *PL*, B-31.